1573

Drinking Water Surveillance Program

SARNIA (LAMBTON COUNTY) WATER TREATMENT PLANT

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SARNIA (LAMBTON COUNTY) WATER TREATMENT PLANT

DRINKING WATER SURVEILLANCE PROGRAM

ANNUAL REPORT 1989

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EXECUTIVE SUMMARY

DRINKING WATER SURVEILLANCE PROGRAM

SARNIA (LAMBTON COUNTY) WATER TREATMENT PLANT
1989 ANNUAL REPORT

The Drinking Water Surveillance Program (DWSP) for Ontario is a monitoring program providing immediate, reliable, current information on drinking water quality. The DWSP officially began in April 1986 and is designed to eventually include all municipal supplies in Ontario. In 1989, 65 plants were being monitored.

The Sarnia (Lambton County) Water Treatment Plant is a direct filtration plant which treats water from Lake Huron where it enters the St. Clair River. The process consists of coagulation, flocculation, filtration, disinfection and fluoridation. This plant has a design capacity of 189 x 1000 m^3/day and serves a population of approximately 100,000.

Raw and treated water and samples from one site in the distribution were taken on a monthly basis and were analyzed for the presence of approximately 180 parameters. Parameters were divided into the following groups: Bacteriological, Inorganic and Physical (Laboratory Chemistry, Field Chemistry and Metals) and Organics (Chloroaromatics, Chlorophenols, Pesticides and PCBs, Phenolics, Polyaromatic Hydrocarbons, Specific Pesticides and Volatiles).

A summary of results is shown in Table A.

Inorganic and Physical parameters were below any applicable health related guidelines.

Samples were analyzed monthly for the presence of approximately 110 Organics. Levels did not exceed health related guidelines.

During 1989, the DWSP sampling results indicated that the Sarnia (Lambton County) Water Treatment Plant produced good quality water at the plant and this quality was maintained in the distribution system.

TABLE A

DRINKING WATER SURVEILLANCE PROGRAM SARNIA (LAMBTON COUNTY WTP)

SUMMARY TABLE BY SCAN

SCAN	RAW TESTS	RAW POSITIVE	RAW %POSITIVE	TREATED TESTS	TREATED POSITIVE	TREATED %POSITIVE	SITE 1 TESTS	SITE 1 POSITIVE	SITE 1 %POSITIVE
BACTERIOLOGICAL	15	9	60	18	4	22	30	2	6
CHEMISTRY (FLD)	34	31	91	66	66	100	142	136	95
CHEMISTRY (LAB)	231	169	73	225	164	72	436	350	80
METALS	264	129	48	264	139	52	564	299	53
CHLOROAROMATICS	140	0	0	140	0	0	154	0	0
CHLOROPHENOLS	12	0	0	12	0	0	.	.	.
PAH	171	0	0	167	0	0	.	.	.
PESTICIDES & PCB	353	0	0	353	0	0	322	0	0
PHENOLICS	10	5	50	11	3	27	.	.	.
SPECIFIC PESTICIDES	64	0	0	64	0	0	11	0	0
VOLATILES	290	1	0	319	45	14	348	49	14
TOTAL	1584	344		1639	421		2007	836	

NO KNOWN HEALTH RELATED GUIDELINES WERE EXCEEDED

A POSITIVE VALUE DENOTES THAT THE RESULT IS GREATER THAN THE STATISTICAL LIMIT OF DETECTION AND IS QUANTIFIABLE
A '.' INDICATES THAT NO SAMPLE WAS TAKEN

DRINKING WATER SURVEILLANCE PROGRAM

SARNIA (LAMBTON COUNTY) WATER TREATMENT PLANT
1989 ANNUAL REPORT

INTRODUCTION

The Drinking Water Surveillance Program (DWSP) for Ontario is a monitoring program providing immediate, reliable, current information on drinking water quality. The DWSP officially began in April 1986 and is designed to eventually include all municipal supplies in Ontario. In 1989, 65 plants were being monitored.

The DWSP program was initiated at the Sarnia (Lambton County) Water Treatment Plant during the fall of 1985 as part of a study on the St. Clair/Detroit River area. Annual reports were published for 1986 (ISBN 0-7729-2563-1), 1987 and 1988 (ISSN 0840-5107). Other historical Sarnia (Lambton County) Water Treatment Plant data is available in the "Drinking Water Survey St. Clair - Detroit River Area" published by the Ministry of the Environment in 1986.

This report contains information and results for 1989.

In order to accommodate the increased number of plants on the DWSP and to facilitate the timely completion of the 1989 series of annual reports, plants with two or more years of published data

would receive an abbreviated annual report. This report maintains the same general format as in previous years but does not include a comprehensive discussion of the results. For more detail on the parameters analyzed and discussion of the results, consult the 1987 and 1988 reports.

PLANT DESCRIPTION

The Sarnia (Lambton County) Water Treatment Plant is a direct filtration plant which treats water from Lake Huron as it enters the St. Clair River. The process consists of coagulation, flocculation, filtration, disinfection and fluoridation. A polyelectrolyte may be added, when required, as a filter aid. This plant has a design capacity of 189 x 1000 m^3/day and flows on day of sampling ranged from 34.7 x 1000 m^3/day to 160.7 x 1000 m^3/day. It serves a population of approximately 100,000.

The plant location is shown in Figure 1. Plant Process details, in a block schematic, are shown in Figure 2. General plant information is presented in Table 2.

SAMPLING AND ANALYSIS

Plant operating personnel perform analyses on parameters for process control (Table 1).

FIGURE 1

DRINKING WATER SURVEILLANCE PROGRAM

SITE LOCATION MAP

LAMBTON AREA WATER TREATMENT PLANT

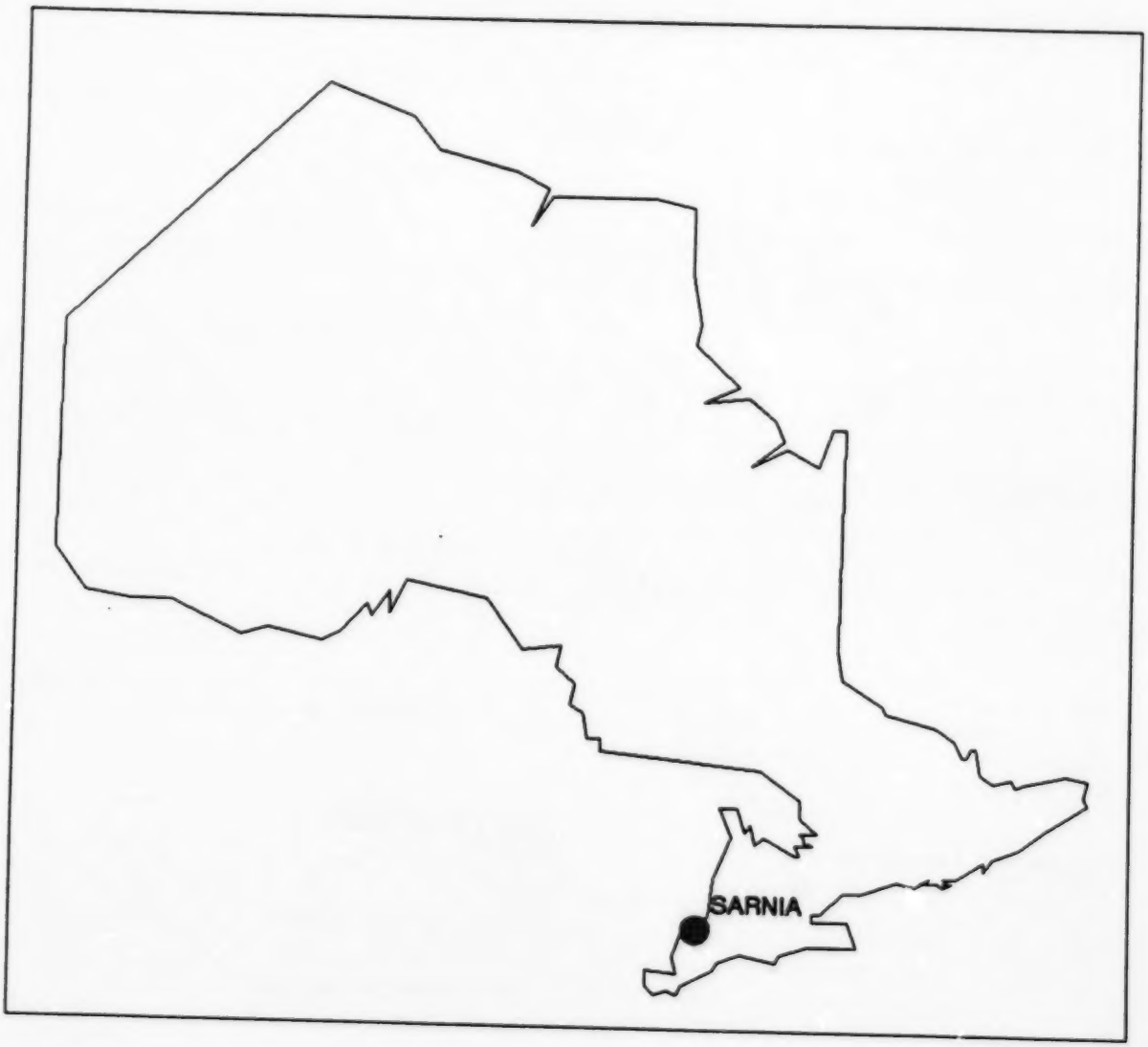
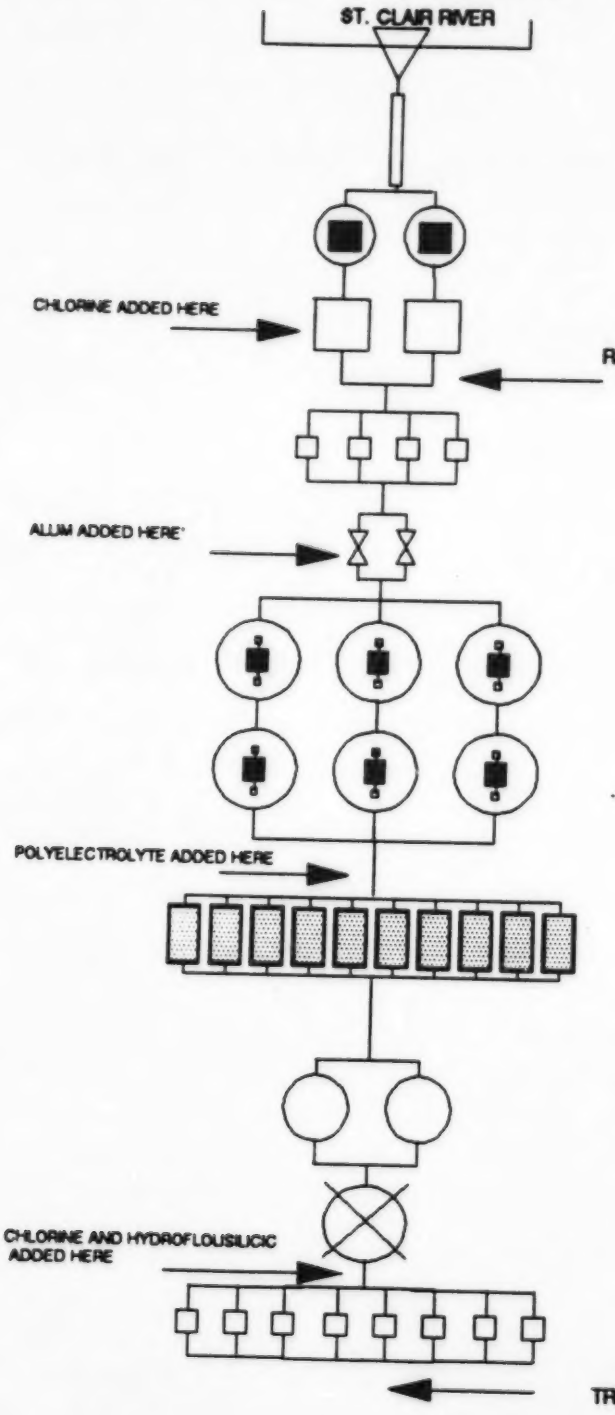


FIGURE 2

SARNIA(LAMBTON AREA) WTP

SCHEMATIC DIAGRAM



CHARACTERISTICS

1 INTAKE PIPE

2 SURGE & SCREEN WELLS

2 LOWLIFT CHAMBERS

RAW WATER SAMPLE SITE

4 LOWLIFT PUMPS

2 FLASH MIXERS

6 FLOCCULATION TANKS

10 FILTER TANKS

2 CLEARWELLS

1 RESERVOIR

8 HIGHLIFT PUMPS

TREATED WATER SAMPLE SITE

TABLE 1

DRINKING WATER SURVEILLANCE PROGRAM ANNUAL REPORT

IN-PLANT MONITORING SARNIA (LAMBTON COUNTY) WTP 1989

PARAMETER	LOCATION	FREQUENCY
Aluminum residual	After filters	every 4 hrs
	Treated water	every 4 hrs
Algae	Raw water	monthly
	Reservoir pre fluoride	monthly
Chlorine residual	After filters	continuous
	After filters	every 4 hrs
	Treated water	every 4 hrs
Fluoride	Raw water	weekly
	Treated water	every 4 hrs
Ph	Raw water	daily
	Treated water	daily
Temperature	Raw water	daily
	Treated water	daily
Turbidity	Raw water	every 4 hrs
	Before filters	weekly
	Filtered water	continuous
	After filters	every 4 hrs

TABLE 2

DRINKING WATER SURVEILLANCE PROGRAM ANNUAL REPORT

GENERAL INFORMATION

SARNIA (LAMBTON COUNTY) WATER TREATMENT PLANT

LOCATION:	1215 FORT STREET P.O. BOX 790 SARNIA, ONTARIO (519-344-7429)
SOURCE:	RAW WATER SOURCE - LAKE HURON/ST. CLAIR RIVER
DESIGN CAPACITY:	189 (1000 M^3/DAY)
OPERATION:	MINISTRY
PLANT SUPERINTENDENT:	J. HORSBURGH
MINISTRY REGION:	SOUTHWESTERN
DISTRICT OFFICER:	O. WIGLE

MUNICIPALITY SERVED	POPULATION
MOORE TWP	10,097
POINT EDWARD VILLAGE	2,373
SARNIA CITY	50,233
SARNIA TWP	20,913
SOMBRA	4,249
BRIGHT'S GROVE	4,000
PLYMPTON	2,500
WYOMIMG	1,800
WATFORD	1,500
FOREST	2,600

Water at the Sarnia Water Treatment Plant and one location in the distribution system was sampled for the presence of approximately 180 parameters monthly in 1989. Samples were analyzed for Specific Pesticides and Chlorophenols in June and November only. Only the raw and treated water at the plant was analyzed for Polyaromatic Hydrocarbons and Phenolics. As of August 1989, the analysis of Triazine pesticides was dropped from the distribution sample. Laboratory analysis was conducted at the Ministry of the Environment facilities in Rexdale, Ontario.

RESULTS

Field Chemistry measurements were recorded on the day of sampling and were entered on the DWSP database as submitted by plant personnel.

Table 3 contains information on the sample day retention time, flow rate and treatment chemical dosages.

Table 4 is a summary break-down of the number of water samples analyzed by parameter and by water type. The number of times that a positive or trace result was detected is also reported.

Positive denotes that the result is greater than the statistical limit of detection established by the Ministry of the Environment (MOE) laboratory staff and is quantifiable. Trace (<T) denotes

that the level measured is greater than the lowest value detectable by the method but lies so close to the detection limit that it cannot be confidently quantified.

Table 5 presents the results for parameters detected on at least one occasion.

Table 6 lists all parameters analyzed on the DWSP.
Associated guidelines and detection limits are also supplied on tables 5 and 6. Parameters are listed alphabetically within each scan.

DISCUSSION

General

Water quality is judged by comparison with the Ontario Drinking Water Objectives (ODWOs) as defined in the 1984 publication (ISBN 0-7743-8985-0). The Province of Ontario has health related and aesthetic objectives for 49 parameters. These are currently under review. When an ODWO is not available, guidelines/limits from other agencies are consulted. The Parameters Listing System (PALIS), recently published (ISBN 0-7729-4461-X) by the MOE, catalogues and keeps current over 1750 guidelines for 650 parameters from agencies throughout the world.

Many of the compounds detected are naturally occurring or are

treatment by-products.

IN THIS REPORT, DISCUSSION IS LIMITED TO THE TREATED AND DISTRIBUTED WATER AND ADDRESSES ONLY THOSE PARAMETERS WITH CONCENTRATIONS ABOVE GUIDELINE VALUES AND ORGANIC PARAMETERS WITH POSITIVE RESULTS.

Results of treated and distributed water indicate that no health related guidelines were exceeded during 1989.

Bacteriology

Standard Plate Count

Two treated samples for standard plate count were over the ODWO aesthetic guideline of 500 counts/mL in April and May, indicating some deterioration in water quality.

Inorganic and Physical Parameters

Aluminum

The plant operational guideline of 100 µg/L as Al in water leaving the plant, was exceeded in six treated water samples.

Fluoride

The Laboratory results indicate that fluoride levels were below the

ODWO recommended range of 1.0-1.4 mg/L in six treated and distributed samples. The Fluoride feed system was shut down during March and April for repairs.

Hardness

The ODWOs indicate that a hardness level of between 80 and 100 mg/L, as calcium carbonate for domestic waters, provides an acceptable balance between corrosion and encrustation. Water supplies with a hardness greater than 200 mg/L are considered poor and would possess a tendency to form scale deposits and result in excessive soap consumption.

Organic Parameters

1,1,1 Trichloroethane

1,1,1 Trichloroethane was detected in the August treated water sample in one of the distribution system samples. The maximum reported value was 0.4 µg/L. The United States Environmental Protection Agency (EPA) has a Maximum Contaminant Level (MCL) for 1,1,1-trichloroethane in drinking water of 200 µg/L.

Trihalomethanes (THMs) are acknowledged to be produced during the water treatment process and will always occur in chlorinated surface waters. THMs are comprised of Chloroform, Chlorodibromomethane and Dichlorobromomethane. Bromoform occurs occasionally. Results are reported for the individual compounds as

well as for total THMs. All Total THM occurrences in the treated and distributed samples, ranging from 27.4 to 62.0 µg/L, were well below the ODWO of 350 µg/L.

CONCLUSIONS

Results listed in this report for 1989 are consistent with results reported for previous years.

No health related water quality guidelines were exceeded.

The treated water was of good quality and this was maintained in the distribution system.

TABLE 3

DRINKING WATER SURVEILLANCE PROGRAM SARNIA (LAMBTON COUNTY WTP) SAMPLE DAY CONDITIONS FO 1989

	SAMPLE DAY CONDITIONS		TREATMENT CHEMICAL DOSAGES (MG/L)			
DATE	DELAY* TIME(HRS)	FLOW (1000M3)	PRE-CHLORINATION CHLORINE	COAGULATION ALUM LIQUID	FLUORIDATION HYDROFLUOSILICIC ACID	POST-CHLORINATION CHLORINE
JAN 09	16.4	55.4	1.10	5.00	1.00	.17
FEB 08	34.5	57.9	1.16	5.70	1.12	.41
MAR 08	.1	34.3	1.20	6.45	.	.27
APR 05	32.0	61.8	1.08	7.60	.	.49
MAY 03	31.3	63.4	1.10	8.20	1.07	.25
JUN 04	21.6	92.2	1.17	5.75	1.21	.35
JUL 04	20.6	160.7	1.34	7.31	1.18	1.14
AUG 10	16.0	125.0	.90	8.70	1.10	.64
SEP 07	.	.	1.21	8.45	.79	.17
OCT 12	27.2	73.0	1.27	7.90	1.35	.42
NOV 08	30.2	65.8	1.00	9.00	1.23	.37
DEC 06	24.0	52.4	1.20	8.90	1.20	.46

* THE DELAY TIME BETWEEN THE RAW AND TREATED WATER SAMPLING, SHOULD ESTIMATE THE RETENTION TIME.

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM SARNIA

SUMMARY TABLE OF RESULTS (1989)

SCAN	PARAMETER	RAW			TREATED			SITE 1		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
BACTERIOLOGICAL	FECAL COLIFORM MF	5	2	0	.	.	.	.	.	.
	STANDRD PLATE CNT MF	.	.	.	6	4	0	10	2	0
	TOTAL COLIFORM MF	5	3	0	6	0	0	10	0	0
	T COLIFORM BCKGRD MF	5	4	0	6	0	0	10	0	0
*TOTAL SCAN BACTERIOLOGICAL		15	9	0	18	4	0	30	2	0
*TOTAL GROUP BACTERIOLOGICAL		15	9	0	18	4	0	30	2	0
CHEMISTRY (FLD)	FLD CHLORINE (COMB)	1	0	0	11	11	0	24	23	0
	FLD CHLORINE FREE	1	0	0	11	11	0	23	19	0
	FLD CHLORINE (TOTAL)	1	0	0	11	11	0	24	23	0
	FLD PH	11	11	0	11	11	0	24	24	0
	FLD TEMPERATURE	9	9	0	11	11	0	24	24	0
	FLD TURBIDITY	11	11	0	11	11	0	23	23	0
*TOTAL SCAN CHEMISTRY (FLD)		34	31	0	66	66	0	142	136	0
CHEMISTRY (LAB)	ALKALINITY	11	11	0	11	11	0	24	24	0
	CALCIUM	11	11	0	11	11	0	24	24	0
	CYANIDE	11	0	0	11	0	0	12	0	1
	CHLORIDE	11	11	0	11	11	0	24	24	0
	COLOUR	11	0	11	11	0	9	24	0	17
	CONDUCTIVITY	11	11	0	11	11	0	24	24	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM SARNIA

SUMMARY TABLE OF RESULTS (1989)

SCAN	PARAMETER	RAW			TREATED			SITE 1		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
CHEMISTRY (LAB)	FLUORIDE	11	11	0	11	11	0	24	24	0
	HARDNESS	11	11	0	11	11	0	24	24	0
	IONCAL	11	11	0	11	11	0	24	24	0
	LANGELIERS INDEX	11	11	0	5	5	0	16	16	0
	MAGNESIUM	11	11	0	11	11	0	24	24	0
	SODIUM	11	11	0	11	11	0	24	24	0
	AMMONIUM TOTAL	11	2	7	11	0	7	24	1	19
	NITRITE	11	2	9	11	0	6	24	1	16
	TOTAL NITRATES	11	11	0	11	11	0	24	24	0
	NITROGEN TOT KJELD	11	11	0	11	9	2	24	23	1
	PH	11	11	0	11	11	0	24	24	0
	PHOSPHORUS FIL REACT	11	0	6	11	8	2	.	.	.
	PHOSPHORUS TOTAL	11	0	11	11	0	10	.	.	.
	SULPHATE	11	11	0	11	11	0	24	24	0
	TURBIDITY	11	11	0	11	10	1	24	21	3
*TOTAL SCAN CHEMISTRY (LAB)		231	169	44	225	164	37	436	350	57
METALS	SILVER	11	0	2	11	0	1	24	0	8
	ALUMINUM	11	11	0	11	11	0	24	24	0
	ARSENIC	11	4	7	11	4	7	24	8	16
	BARIUM	11	11	0	11	11	0	24	24	0
	BORON	11	6	5	11	8	3	24	16	8
	BERYLLIUM	11	0	6	11	0	7	24	0	15

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM SARNIA

SUMMARY TABLE OF RESULTS (1989)

SCAN	PARAMETER	RAW			TREATED			SITE 1		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
METALS	CADMIUM	11	0	2	11	0	2	24	0	5
	COBALT	11	0	10	11	0	9	24	0	20
	CHROMIUM	11	7	3	11	8	2	24	20	4
	COPPER	11	11	0	11	11	0	24	24	0
	IRON	11	2	6	11	0	10	24	0	18
	MERCURY	11	1	7	11	0	9	12	0	9
	MANGANESE	11	11	0	11	11	0	24	21	3
	MOLYBDENUM	11	7	4	11	8	3	24	19	5
	NICKEL	11	0	9	11	0	9	24	3	17
	LEAD	11	7	4	11	8	2	24	24	0
	ANTIMONY	11	11	0	11	11	0	24	24	0
	SELENIUM	11	0	6	11	0	8	24	1	18
	STRONTIUM	11	11	0	11	11	0	24	24	0
	TITANIUM	11	9	2	11	11	0	24	23	1
	THALLIUM	11	0	2	11	0	4	24	0	10
	URANIUM	11	9	2	11	8	3	24	12	12
	VANADIUM	11	0	11	11	7	4	24	10	14
	ZINC	11	11	0	11	11	0	24	22	2
*TOTAL SCAN METALS		264	129	88	264	139	83	564	299	185
*TOTAL GROUP INORGANIC & PHYSICAL		529	329	132	555	369	120	1142	785	242
CHLOROAROMATICS	HEXACHLOROBUTADIENE	10	0	0	10	0	0	11	0	0
	123 TRICHLOROBENZENE	10	0	0	10	0	0	11	0	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM SARNIA

SUMMARY TABLE OF RESULTS (1989)

SCAN	PARAMETER	RAW			TREATED			SITE 1		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
CHLOROAROMATICS	1234 T-CHLOROBENZENE	10	0	0	10	0	0	11	0	0
	1235 T-CHLOROBENZENE	10	0	0	10	0	0	11	0	0
	124 TRICHLOROBENZENE	10	0	0	10	0	0	11	0	0
	1245 T-CHLOROBENZENE	10	0	0	10	0	0	11	0	0
	135 TRICHLOROBENZENE	10	0	0	10	0	0	11	0	0
	HCB	10	0	0	10	0	0	11	0	0
	HEXACHLOROETHANE	10	0	0	10	0	0	11	0	0
	OCTACHLOROSTYRENE	10	0	0	10	0	0	11	0	0
	PENTACHLOROBENZENE	10	0	0	10	0	0	11	0	0
	236 TRICHLOROTOLUENE	10	0	0	10	0	0	11	0	0
	245 TRICHLOROTOLUENE	10	0	0	10	0	0	11	0	0
	26A TRICHLOROTOLUENE	10	0	0	10	0	0	11	0	0
*TOTAL SCAN CHLOROAROMATICS		140	0	0	140	0	0	154	0	0
CHLOROPHENOLS	234 TRICHLOROPHENOL	2	0	0	2	0	0	.	.	.
	2345 T-CHLOROPHENOL	2	0	0	2	0	0	.	.	.
	2356 T-CHLOROPHENOL	2	0	0	2	0	0	.	.	.
	245-TRICHLOROPHENOL	2	0	0	2	0	0	.	.	.
	246-TRICHLOROPHENOL	2	0	0	2	0	0	.	.	.
	PENTACHLOROPHENOL	2	0	0	2	0	0	.	.	.
*TOTAL SCAN CHLOROPHENOLS		12	0	0	12	0	0	0	0	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM SARNIA

SUMMARY TABLE OF RESULTS (1989)

SCAN	PARAMETER	RAW			TREATED			SITE 1		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
PAH	PHENANTHRENE	11	0	0	10	0	0	.	.	.
	ANTHRACENE	11	0	0	10	0	0	.	.	.
	FLUORANTHENE	11	0	0	10	0	0	.	.	.
	PYRENE	11	0	0	10	0	0	.	.	.
	BENZO(A)ANTHRACENE	11	0	0	11	0	0	.	.	.
	CHRYSENE	11	0	0	11	0	0	.	.	.
	DIMETH. BENZ(A)ANTHR	2	0	0	3	0	0	.	.	.
	BENZO(E) PYRENE	11	0	0	11	0	0	.	.	.
	BENZO(B) FLUORANTHEN	11	0	0	11	0	0	.	.	.
	PERYLENE	11	0	0	11	0	0	.	.	.
	BENZO(K) FLUORANTHEN	11	0	0	11	0	0	.	.	.
	BENZO(A) PYRENE	4	0	0	4	0	0	.	.	.
	BENZO(G,H,I) PERYLEN	11	0	0	11	0	0	.	.	.
	DIBENZO(A,H) ANTHRAC	11	0	0	11	0	0	.	.	.
	INDENO(1,2,3-C,D) PY	11	0	0	10	0	0	.	.	.
	BENZO(B) CHRYSENE	11	0	0	11	0	0	.	.	.
	CORONENE	11	0	0	11	0	0	.	.	.
*TOTAL SCAN PAH		171	0	0	167	0	0	0	0	0
PESTICIDES & PCB	ALDRIN	10	0	0	10	0	0	11	0	0
	ALPHA BHC	10	0	5	10	0	5	11	0	8
	BETA BHC	10	0	0	10	0	0	11	0	0
	LINDANE	10	0	0	10	0	0	11	0	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM SARNIA

SUMMARY TABLE OF RESULTS (1989)

SCAN	PARAMETER	RAW			TREATED			SITE 1		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
PESTICIDES & PCB	ALPHA CHLORDANE	10	0	0	10	0	0	11	0	0
	GAMMA CHLORDANE	10	0	0	10	0	0	11	0	0
	DIELDRIN	10	0	0	10	0	0	11	0	0
	METHOXYCHLOR	10	0	0	10	0	0	11	0	0
	ENDOSULFAN I	10	0	0	10	0	0	11	0	0
	ENDOSULFAN II	10	0	0	10	0	0	11	0	0
	ENDRIN	10	0	0	10	0	0	11	0	0
	ENDOSULFAN SULPHATE	10	0	0	10	0	0	11	0	0
	HEPTACHLOR EPOXIDE	10	0	0	10	0	0	11	0	0
	HEPTACHLOR	10	0	0	10	0	0	11	0	0
	MIREX	10	0	0	10	0	0	11	0	0
	OXYCHLORDANE	10	0	0	10	0	0	11	0	0
	OPDDT	10	0	0	10	0	0	11	0	0
	PCB	10	0	0	10	0	0	11	0	0
	DDD	10	0	0	10	0	0	11	0	0
	PPDDE	10	0	0	10	0	0	11	0	0
	PPDDT	10	0	0	10	0	0	11	0	0
	AMETRINE	11	0	0	11	0	0	7	0	0
	ATRAZINE	11	0	0	11	0	0	7	0	0
	ATRATONE	11	0	0	11	0	0	7	0	0
	CYANAZINE (BLADEX)	11	0	0	11	0	0	7	0	0
	D-ETHYL ATRAZINE	11	0	0	11	0	0	7	0	0
	D-ETHYL SIMAZINE	11	0	0	11	0	0	7	0	0
	PROMETONE	11	0	0	11	0	0	7	0	0
	PROPAZINE	11	0	0	11	0	0	7	0	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM SARNIA

SUMMARY TABLE OF RESULTS (1989)

SCAN	PARAMETER	RAW			TREATED			SITE 1		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
PESTICIDES & PCB	PROMETRYNE	11	0	0	11	0	0	7	0	0
	METRIBUZIN (SENCOR)	11	0	0	11	0	0	7	0	0
	SIMAZINE	11	0	0	11	0	0	7	0	0
	ALACHLOR (LASSO)	11	0	0	11	0	0	7	0	0
	METOLACHLOR	11	0	0	11	0	0	7	0	0
*TOTAL SCAN PESTICIDES & PCB		353	0	5	353	0	5	322	0	8
PHENOLICS	PHENOLICS	10	5	4	11	3	7	.	.	.
*TOTAL SCAN PHENOLICS		10	5	4	11	3	7	0	0	0
SPECIFIC PESTICIDES	TOXAPHENE	10	0	0	10	0	0	11	0	0
	2,4,5-T	2	0	0	2	0	0	.	.	.
	2,4-D	2	0	0	2	0	0	.	.	.
	2,4-DB	2	0	0	2	0	0	.	.	.
	2,4 D PROPIONIC ACID	2	0	0	2	0	0	.	.	.
	DICAMBA	2	0	0	2	0	0	.	.	.
	PICHLORAM	0	0	0	0	0	0	.	.	.
	SILVEX	2	0	0	2	0	0	.	.	.
	DIAZINON	2	0	0	2	0	0	.	.	.
	DICHLOROVOS	2	0	0	2	0	0	.	.	.
	CHLORPYRIFOS	2	0	0	2	0	0	.	.	.

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM SARNIA

SUMMARY TABLE OF RESULTS (1989)

SCAN	PARAMETER	RAW			TREATED			SITE 1		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
SPECIFIC PESTICIDES	ETHION	2	0	0	2	0	0	.	.	.
	AZINPHOS-METHYL	0	0	0	0	0	0	.	.	.
	MALATHION	2	0	0	2	0	0	.	.	.
	MEVINPHOS	2	0	0	2	0	0	.	.	.
	METHYL PARATHION	2	0	0	2	0	0	.	.	.
	METHYLTRITHION	2	0	0	2	0	0	.	.	.
	PARATHION	2	0	0	2	0	0	.	.	.
	PHORATE	2	0	0	2	0	0	.	.	.
	RELDAN	2	0	0	2	0	0	.	.	.
	RONNEL	2	0	0	2	0	0	.	.	.
	AMINOCARB	1	0	0	1	0	0	.	.	.
	BENOMYL	1	0	0	1	0	0	.	.	.
	BUX	0	0	0	0	0	0	.	.	.
	CARBOFURAN	2	0	0	2	0	0	.	.	.
	CICP	2	0	0	2	0	0	.	.	.
	DIALLATE	2	0	0	2	0	0	.	.	.
	EPTAM	2	0	0	2	0	0	.	.	.
	IPC	2	0	0	2	0	0	.	.	.
	PROPOXUR	2	0	0	2	0	0	.	.	.
	CARBARYL	2	0	0	2	0	0	.	.	.
	BUTYLATE	2	0	0	2	0	0	.	.	.
*TOTAL SCAN SPECIFIC PESTICIDES		64	0	0	64	0	0	11	0	0
VOLATILES	BENZENE	10	0	0	11	0	1	12	0	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM SARNIA

SUMMARY TABLE OF RESULTS (1989)

SCAN	PARAMETER	RAW			TREATED			SITE 1		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
VOLATILES	TOLUENE	10	0	5	11	0	4	12	0	4
	ETHYLBENZENE	10	0	5	11	0	4	12	0	5
	P-XYLENE	10	0	0	11	0	1	12	0	0
	M-XYLENE	10	0	0	11	0	1	12	0	0
	O-XYLENE	10	0	0	11	0	1	12	0	3
	STYRENE	10	1	9	11	0	3	12	0	3
	1,1 DICHLOROETHYLENE	10	0	0	11	0	0	12	0	0
	METHYLENE CHLORIDE	10	0	0	11	0	0	12	0	0
	T1,2DICHLOROETHYLENE	10	0	0	11	0	0	12	0	0
	1,1 DICHLOROETHANE	10	0	0	11	0	0	12	0	0
	CHLOROFORM	10	0	0	11	11	0	12	12	0
	111, TRICHLOROETHANE	10	0	2	11	1	0	12	1	1
	1,2 DICHLOROETHANE	10	0	0	11	0	0	12	0	0
	CARBON TETRACHLORIDE	10	0	0	11	0	0	12	0	0
	1,2 DICHLOROPROPANE	10	0	0	11	0	0	12	0	0
	TRICHLOROETHYLENE	10	0	0	11	0	0	12	0	0
	DICHLOROBROMOMETHANE	10	0	0	11	11	0	12	12	0
	112 TRICHLOROETHANE	10	0	0	11	0	0	12	0	0
	CHLORODIBROMOMETHANE	10	0	0	11	11	0	12	12	0
	T-CHLOROETHYLENE	10	0	0	11	0	1	12	0	0
	BROMOFORM	10	0	0	11	0	11	12	0	11
	1122 T-CHLOROETHANE	10	0	0	11	0	0	12	0	0
	CHLOROBENZENE	10	0	0	11	0	0	12	0	0
	1,4 DICHLOROBENZENE	10	0	0	11	0	1	12	0	0
	1,3 DICHLOROBENZENE	10	0	0	11	0	0	12	0	0

TABLE 4

DRINKING WATER SURVEILLANCE PROGRAM SARNIA

SUMMARY TABLE OF RESULTS (1989)

SCAN	PARAMETER	RAW			TREATED			SITE 1		
		TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE	TOTAL	POSITIVE	TRACE
VOLATILES	1,2 DICHLOROBENZENE	10	0	1	11	0	1	12	0	0
	ETHLYENE DIBROMIDE	10	0	0	11	0	0	12	0	0
	TOTL TRIHALOMETHANES	10	0	0	11	11	0	12	12	0
*TOTAL SCAN VOLATILES		290	1	22	319	45	29	348	49	27
*TOTAL GROUP ORGANIC		1040	6	31	1066	48	41	835	49	35
TOTAL		1584	344	163	1639	421	161	2007	836	277

KEY TO TABLE 5 and 6

A ONTARIO DRINKING WATER OBJECTIVES (ODWO)
1. Maximum Acceptable Concentration (MAC)
1+. MAC for Total Trihalomethanes
1*. MAC for Bacteriological Analyses
Poor water quality is indicated when :
- total coliform counts > 0 < 5
- P/A Bottle Test is present after 48 hours
- Aeromonas organisms are detected in more than 25% of samples in a single submission or in successive submissions from the same sampling site
- Pseudomonas Aeruginosa, Staphylococcus Aureus and members of the Fecal Streptococcus group should not be detected in any sample
- Standard Plate Count should not exceed 500 organisms per ml at 35 ^{0}C within 48 hours

2. Interim Maximum Acceptable Concentration (IMAC)
3. Maximum Desirable Concentration (MDC)
4. Aesthetic or Recommended Operational Guideline
- hardness levels between 80 and 100 mg/L as calcium carbonate are considered to provide an acceptable balance between corrosion and incrustation, water supplies with a hardness >200 mg/L are considered poor and those in excess of 500 mg/L are unacceptable.

B HEALTH & WELFARE CANADA (H&W)
1. Maximum Acceptable Concentration (MAC)
2. Proposed MAC
3. Interim MAC
4. Aesthetic Objective (AO) (for xylenes, a total)

C WORLD HEALTH ORGANIZATION (WHO)
1. Guideline Value (GV)
2. Tentative GV
3. Aesthetic GV

D US ENVIRONMENTAL PROTECTION AGENCY (EPA)
1. Maximum Contaminant Level (MCL)
2. Suggested No-Adverse Effect Level (SNAEL)
3. Lifetime Health Advisory
4. EPA Ambient Water Quality Criteria
5. Maximum Contaminant Level Goal (MCLG)

F EUROPEAN ECONOMIC COMMUNITY (EEC)
1. Health Related Guideline Level
2. Aesthetic Guideline Level
3. Maximum Admissable Concentration (MADC)

G CALIFORNIA STATE DEPARTMENT OF HEALTH-GUIDELINE VALUE

H USSR MAXIMUM PERMISSIBLE CONCENTRATION

I NEW YORK STATE AMBIENT WATER GUIDELINE

N/A NONE AVAILABLE

INTERPRETATION OF DATA

The interpretation of analytical results that are obtained from measurements near the limit of detection of the measurement process is subject to greater uncertainty than those at higher concentrations. The principle areas of concern relate to whether the substance has actually been detected, whether it has been properly identified, and whether it is an artifact of the measurement process. In other words, false positives can be caused by the instrumentation or the test procedures used, when in fact these compounds are not present in the sample.

There are several methods to treat data from such measurements:
1. Exclude the low-level data because of this uncertainty factor. Studies of long-term environmental trends and modelling may however, be adversely affected by the exclusion of such data.
2. Qualify these data so the user is aware of the greater uncertainty associated with their use.

For the Drinking Water Surveillance Program, measurements near the limit of detection of the measurement process are reported with the code "<T". Results qualified by "W" indicate a zero measurement. These results are reported for purposes of modelling and long-term trend analysis and no significance should be attributed to a single determination of a substance below "T" (a single determination may well be a false positive). Repeat analysis or additional data are needed before it can be stated with certainty that the substance in question was truly present. On the other hand, it is less likely that repeated detection of a substance at or near the limit of detection at a specific location is solely due to an artifact in the measurement system, and more likely represents a true positive. The average of such data however, is still only an estimate of the amount of substance present subject to the possible biases of the method used.

LABORATORY RESULTS, REMARK DESCRIPTIONS

.	No Sample Taken
BDL	Below Minimum Measurable Amount
<T	Greater Than Detection Limit But Not Confident (SEE INTERPRETATION OF RESULTS ABOVE)
>	Results Are Greater Than The Upper Limit
<=>	Approximate Result
!CS	No Data: Contamination Suspected
!IL	No Data: Sample Incorrectly Labelled
!IS	No Data: Insufficient Sample
!IV	No Data: Inverted Septum
!LA	No Data: Laboratory Accident
!LD	No Data: Test Queued After Sample Discarded

!LA	No Data: Laboratory Accident
!LD	No Data: Test Queued After Sample Discarded
!NA	No Data: No Authorization To Perform Reanalysis
!NP	No Data: No Procedure
!NR	No Data: Sample Not Received
!OP	No Data: Obscured Plate
!QU	No Data: Quality Control Unacceptable
!PE	No Data: Procedural Error - Sample Discarded
!PH	No Data: Sample pH Outside Valid Range
!RE	No Data: Received Empty
!RO	No Data: See Attached Report (no numeric results)
!SM	No Data: Sample Missing
!SS	No Data: Send Separate Sample Properly Preserved
!UI	No Data: Indeterminant Interference
!TX	No Data: Time Expired
A3C	Approximate, Total Count Exceeded 300 Colonies
APL	Additional Peak, Large, Not Priority Pollutant
APS	Additional Peak, Less Than, Not Priority Pollutant
CIC	Possible Contamination, Improper Cap
CRO	Calculated Result Only
PPS	Test Performed On Preserved Sample
RMP	P and M-Xylene Not Separated
RRV	Rerun Verification
RVU	Reported Value Unusual
SPS	Several Peaks, Small, Not Priority Pollutant
UCR	Unreliable: Could Not Confirm By Reanalysis
UCS	Unreliable: Contamination Suspected
UIN	Unreliable: Indeterminant Interference
XP	Positive After X Number of Hours
T# (T06)	Result Taken After # Hours

TABLE 5

DRINKING WATER SURVEILLANCE PROGRAM SARNIA (LAMBTON COUNTY WTP) 1989

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM		
	RAW	TREATED	SITE 1		
			STANDING	FREE FLOW	
BACTERIOLOGICAL					
FECAL COLIFORM MF (CT/100ML)				DET'N LIMIT = 0	GUIDELINE = 0 (A1)
FEB	3	.	.	.	
APR	0	.	.	.	
AUG	0	.	.	.	
OCT	4	.	.	.	
DEC	0	.	.	.	
STANDRD PLATE CNT MF (CT/ML)				DET'N LIMIT = 0	GUIDELINE =500/ml (A1)
JAN	.	1 <=>	.	0 <=>	
FEB	.	290 T48	.	0 <=>	
MAR	.	.	.	0 <=>	
APR	.	2400 >	.	0 <=>	
MAY	.	1550	.	0 <=>	
JUN	.	.	.	1 <=>	
AUG	.	107	.	25	
SEP	.	.	.	180	
OCT	.	7 <=>	.	1 <=>	
DEC	.	.	.	0 <=>	
TOTAL COLIFORM MF (CT/100ML)				DET'N LIMIT = 0	GUIDELINE = 5/100ML (A1)
JAN	.	0 T24	.	0 T48	
FEB	3	0 T48	.	0 T24	
MAR	.	.	.	0 T48	
APR	0	0 T48	.	0 T24	
MAY	.	0	.	0	
JUN	.	.	.	0	
AUG	1	0	.	0	
SEP	.	.	.	0	
OCT	20	0	.	0	
DEC	0	.	.	0	
T COLIFORM BCKGRD MF (CT/100ML)				DET'N LIMIT =0	GUIDELINE = N/A
JAN	.	0 T24	.	0 T48	
FEB	7	0 T48	.	0 T24	
MAR	.	.	.	0 T48	
APR	250	0 T48	.	0 T24	
MAY	.	0	.	0	
JUN	.	.	.	0	
AUG	31	0	.	0	
SEP	.	.	.	0	
OCT	114	0	.	0	
DEC	0	.	.	0	

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 1	
			STANDING	FREE FLOW
CHEMISTRY (FLD)				
FLD CHLORINE (COMB) (N/A)				**DET'N LIMIT = N/A GUIDELINE = N/A**
JAN	.	.100	.100	.100
FEB	.	.100	.100	.100
MAR	.	.150	.100	.100
APR	.	.120	.100	.100
MAY	.	.120	.100	.110
JUN	.	.110	.100	.100
JUL	.	.930	.100	.100
AUG	.	.680	.100	.100
SEP	.000	.130	.100	.100
OCT	.	1.030	.100	.100
NOV	.	.100	.100	.100
DEC	.	.	.000	.150
FLD CHLORINE FREE (N/A)				**DET'N LIMIT = N/A GUIDELINE = N/A**
JAN	.	.820	.150	.550
FEB	.	.850	.200	.700
MAR	.	.810	.	.600
APR	.	.830	.100	.500
MAY	.	.800	.500	.500
JUN	.	.850	.100	.600
JUL	.	.790	.000	.600
AUG	.	.780	.200	.500
SEP	.000	.550	.000	.300
OCT	.	.870	.000	.500
NOV	.	.800	.100	.600
DEC	.	.	.000	.400
FLD CHLORINE (TOTAL) (N/A)				**DET'N LIMIT = N/A GUIDELINE = N/A**
JAN	.	.920	.250	.650
FEB	.	.950	.300	.800
MAR	.	.960	.100	.700
APR	.	.950	.200	.600
MAY	.	.920	.600	.610
JUN	.	.960	.200	.700
JUL	.	1.720	.100	.700
AUG	.	1.460	.300	.600
SEP	.000	.680	.400	.400
OCT	.	1.900	.100	.600
NOV	.	.900	.200	.700
DEC	.	.	.000	.550
FLD PH (N/A)				**DET'N LIMIT = N/A GUIDELINE = N/A**
JAN	.	7.400	7.300	7.300
FEB	8.050	7.350	7.500	7.500
MAR	8.050	7.430	7.500	7.500
APR	7.890	7.520	7.500	7.500
MAY	8.000	7.430	7.500	7.500
JUN	8.200	7.220	7.400	7.400
JUL	8.150	7.390	7.400	7.400
AUG	8.050	7.150	7.300	7.300
SEP	8.140	7.250	7.500	7.500
OCT	8.030	7.340	7.350	7.350
NOV	8.200	7.350	7.400	7.400
DEC	8.010	.	7.500	7.500

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM		
	RAW	TREATED	SITE 1		
			STANDING	FREE FLOW	
FLD TEMPERATURE (^{O}C)				DET'N LIMIT = N/A	GUIDELINE = N/A
JAN	.	4.000	16.000	6.500	
FEB	1.000	3.000	16.500	6.500	
MAR	.	3.000	17.000	6.000	
APR	1.000	4.000	17.000	7.000	
MAY	5.000	7.000	10.000	10.000	
JUN	10.000	12.000	21.000	13.000	
JUL	15.600	17.300	23.000	17.000	
AUG	22.500	22.500	22.000	21.000	
SEP	20.400	22.000	23.000	20.000	
OCT	13.600	16.000	19.000	17.000	
NOV	11.000	13.000	20.000	14.000	
DEC	.	.	18.500	10.000	
FLD TURBIDITY (FTU)				DET'N LIMIT = N/A	GUIDELINE = N/A
JAN	.	.050	.100	.100	
FEB	1.500	.060	.060	.	
MAR	.520	.060	.110	.110	
APR	.500	.060	.100	.080	
MAY	.670	.050	.070	.070	
JUN	.660	.050	.080	.070	
JUL	.620	.030	.100	.070	
AUG	2.820	.020	.100	.130	
SEP	1.180	.030	.090	.110	
OCT	.600	.050	.150	.120	
NOV	.700	.050	.120	.080	
DEC	2.000	.	.120	.100	

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 1	
			STANDING	FREE FLOW
CHEMISTRY (LAB)				
ALKALINITY (MG/L)				DET'N LIMIT = .200 GUIDELINE = 30-500 (A4)
JAN	.	78.700	79.800	79.700
FEB	84.900	77.300	78.400	78.500
MAR	86.900	79.500	82.700	81.700
APR	81.300	76.000	77.400	76.500
MAY	82.800	75.000	75.200	75.400
JUN	83.300	77.800	75.200	75.500
JUL	85.500	76.400	77.000	76.500
AUG	85.600	76.100	76.600	76.900
SEP	85.000	77.000	76.600	76.900
OCT	84.800	77.200	76.900	76.300
NOV	84.300	78.500	77.200	77.800
DEC	85.500	.	80.100	78.900
CALCIUM (MG/L)				DET'N LIMIT = .100 GUIDELINE = 100 (F2)
JAN	.	26.200	28.000	27.400
FEB	27.800	28.200	27.800	27.800
MAR	29.000	29.800	29.400	29.600
APR	28.400	28.600	29.000	28.800
MAY	28.200	28.200	27.600	27.600
JUN	27.800	28.000	27.600	27.400
JUL	28.200	28.200	28.400	28.400
AUG	28.200	27.000	29.800	27.200
SEP	28.600	28.800	29.000	28.000
OCT	31.300	31.200	32.200	31.500
NOV	29.600	30.000	30.000	29.800
DEC	31.700	.	31.300	31.500
CYANIDE (MG/L)				DET'N LIMIT = .001 GUIDELINE = .20 (A1)
JAN	.	BDL	.	BDL
FEB	BDL	BDL	.	BDL
MAR	BDL	BDL	.	BDL
APR	BDL	BDL	.	BDL
MAY	BDL	BDL	.	BDL
JUN	BDL	BDL	.	BDL
JUL	BDL	BDL	.	BDL
AUG	BDL	BDL	.	BDL
SEP	BDL	BDL	.	BDL
OCT	BDL	BDL	.	BDL
NOV	BDL	BDL	.	.004 <T
DEC	BDL	.	.	BDL
CHLORIDE (MG/L)				DET'N LIMIT = .200 GUIDELINE = 250 (A3)
JAN	.	7.200	7.400	7.200
FEB	6.300	7.500	7.700	7.400
MAR	6.300	7.500	7.600	7.400
APR	5.700	6.800	6.900	6.800
MAY	6.900	6.900	6.600	6.600
JUN	5.800	7.000	7.200	7.100
JUL	6.100	7.400	7.500	7.400
AUG	6.100	7.400	7.600	7.500
SEP	6.100	7.500	7.800	7.600
OCT	6.000	7.300	7.600	7.500
NOV	5.800	7.000	7.200	7.100
DEC	6.200	.	7.800	7.700

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM		
	RAW	TREATED	SITE 1		
			STANDING	FREE FLOW	
COLOUR (HZU)				DET'N LIMIT = .5	GUIDELINE = 5.0 (A3)
JAN	.	.500 <T	BDL	BDL	
FEB	.500 <T	.500 <T	BDL	BDL	
MAR	.500 <T	BDL	BDL	BDL	
APR	1.000 <T	.500 <T	.500 <T	.500 <T	
MAY	1.000 <T	.500 <T	.500 <T	BDL	
JUN	1.500 <T	1.000 <T	1.000 <T	1.000 <T	
JUL	1.500 <T	1.000 <T	1.000 <T	1.000 <T	
AUG	.500 <T	.500 <T	.500 <T	.500 <T	
SEP	1.500 <T	1.000 <T	.500 <T	.500 <T	
OCT	.500 <T	.500 <T	.500 <T	.500 <T	
NOV	1.000 <T	BDL	.500 <T	.500 <T	
DEC	1.000 <T	.	1.000 <T	.500 <T	
CONDUCTIVITY (µMHO/CM)				DET'N LIMIT = 1.0	GUIDELINE = 400 (F2)
JAN	.	219	219	220	
FEB	217	219	221	220	
MAR	223	227	228	227	
APR	212	216	219	218	
MAY	215	218	219	220	
JUN	214	216	221	221	
JUL	215	219	220	220	
AUG	216	221	221	222	
SEP	216	220	222	222	
OCT	217	221	226	222	
NOV	213	216	220	219	
DEC	220	.	226	226	
FLUORIDE (MG/L)				DET'N LIMIT = .01	GUIDELINE = 2.4 (A1)
JAN	.	1.080	.860	1.000	
FEB	.080	1.260	1.040	.940	
MAR	.100	.780	.100	.100	
APR	.080	.060	.080	.080	
MAY	.080	.940	.900	.900	
JUN	.080	.760	.940	.920	
JUL	.060	1.200	1.280	1.300	
AUG	.060	1.220	1.320	1.340	
SEP	.080	.540	1.120	.900	
OCT	.080	1.140	1.180	1.280	
NOV	.080	1.140	1.240	1.240	
DEC	.100	.	1.280	1.240	
HARDNESS (MG/L)				DET'N LIMIT = .50	GUIDELINE = 80-100 (A4)
JAN	.	97.000	100.000	99.000	
FEB	101.000	102.000	101.000	101.000	
MAR	103.000	106.000	104.000	103.000	
APR	101.000	102.000	103.000	103.000	
MAY	104.000	103.000	102.000	101.000	
JUN	100.000	102.000	100.000	99.000	
JUL	102.000	100.000	100.000	102.000	
AUG	103.000	98.000	106.000	98.000	
SEP	103.000	103.000	103.000	101.000	
OCT	109.500	108.700	112.200	109.200	
NOV	105.000	106.000	105.000	106.000	
DEC	111.700	.	110.100	111.200	

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 1	
			STANDING	FREE FLOW
IONCAL (N/A)				DET'N LIMIT = N/A GUIDELINE = N/A
JAN	.	5.471	3.974	4.911
FEB	.720	3.289	.862	1.529
MAR	2.060	1.779	2.163	2.683
APR	4.995	5.637	4.495	5.469
MAY	2.843	5.579	4.648	4.061
JUN	.495	.172	.343	1.007
JUL	.854	.083	.288	1.052
AUG	.603	2.506	2.906	3.216
SEP	1.487	.490	.295	3.477
OCT	5.560	6.003	8.844	7.490
NOV	3.039	4.376	3.308	4.265
DEC	6.815	.	6.550	7.737
LANGELIERS INDEX (N/A)				DET'N LIMIT = N/A GUIDELINE = N/A
JAN	.	-.163	-.098	-.099
FEB	.136	.021	-.050	-.049
MAR	.212	-.016	.225	.133
APR	.129	.041	.034	.076
MAY	.172	.138	.170	.170
JUN	.189	-.048	.029	.038
JUL	.066	-.284	-.268	-.251
AUG	.246	.085	.190	.152
SEP	.219	-.012	-.012	.005
OCT	.277	.124	.114	.132
NOV	.182	-.134	-.223	.028
DEC	.205	.	.109	.095
MAGNESIUM (MG/L)				DET'N LIMIT = .05 GUIDELINE = 30 (F2)
JAN	.	7.800	7.400	7.300
FEB	7.700	7.700	7.700	7.700
MAR	7.400	7.600	7.500	7.200
APR	7.300	7.500	7.400	7.500
MAY	8.100	7.900	8.000	7.900
JUN	7.400	7.600	7.500	7.500
JUL	7.600	7.300	7.200	7.500
AUG	7.870	7.400	7.620	7.400
SEP	7.500	7.500	7.500	7.400
OCT	7.650	7.500	7.750	7.400
NOV	7.600	7.500	7.400	7.700
DEC	7.850	.	7.800	7.900
SODIUM (MG/L)				DET'N LIMIT = .200 GUIDELINE = 200 (C3)
JAN	.	3.200	3.200	3.400
FEB	3.400	3.600	3.600	3.600
MAR	3.600	3.600	3.600	3.200
APR	4.000	3.800	3.800	3.800
MAY	3.400	3.400	3.400	3.400
JUN	3.600	3.400	3.400	3.400
JUL	4.600	3.400	3.600	3.400
AUG	3.400	3.600	2.800	3.200
SEP	3.400	3.400	3.200	3.000
OCT	4.000	3.800	3.900	3.800
NOV	3.400	3.400	3.400	3.400
DEC	3.600	.	4.000	3.900

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM		
	RAW	TREATED	SITE 1		
			STANDING	FREE FLOW	
AMMONIUM TOTAL (MG/L)				DET'N LIMIT = .002	GUIDELINE = .05 (F2)
JAN	.	.008 <T	.004 <T	.004 <T	
FEB	.006 <T	.006 <T	.004 <T	.006 <T	
MAR	.002 <T	BDL	BDL	BDL	
APR	.008 <T	.004 <T	.006 <T	.004 <T	
MAY	.004 <T	BDL	.002 <T	.002 <T	
JUN	.004 <T	BDL	.004 <T	.002 <T	
JUL	.012	.006 <T	.004 <T	.006 <T	
AUG	.004 <T	.002 <T	.004 <T	.006 <T	
SEP	BDL	.004 <T	.002 <T	.004 <T	
OCT	BDL	.002 <T	BDL	.002 <T	
NOV	.002 <T	BDL	.004 <T	.002 <T	
DEC	.028	.	.012	BDL	
NITRITE (MG/L)				DET'N LIMIT = .001	GUIDELINE = 1.00 (A1)
JAN	.	BDL	.001 <T	BDL	
FEB	.002 <T	.001 <T	.001 <T	BDL	
MAR	.005	.002 <T	.003 <T	.002 <T	
APR	.003 <T	.001 <T	.002 <T	.001 <T	
MAY	.004 <T	BDL	.001 <T	BDL	
JUN	.003 <T	BDL	.002 <T	.001 <T	
JUL	.003 <T	.001 <T	.001 <T	.001 <T	
AUG	.004 <T	BDL	.001 <T	BDL	
SEP	.005	.003 <T	.002 <T	.003 <T	
OCT	.004 <T	.001 <T	.005	.001 <T	
NOV	.003 <T	BDL	BDL	BDL	
DEC	.002 <T	.	.002 <T	BDL	
TOTAL NITRATES (MG/L)				DET'N LIMIT = .020	GUIDELINE = 10.0 (A1)
JAN	.	.305	.295	.300	
FEB	.340	.330	.340	.330	
MAR	.330	.325	.330	.325	
APR	.330	.330	.335	.330	
MAY	.325	.320	.320	.315	
JUN	.305	.340	.315	.335	
JUL	.305	.300	.305	.310	
AUG	.300	.290	.295	.285	
SEP	.280	.285	.275	.270	
OCT	.295	.295	.290	.285	
NOV	.275	.250	.280	.275	
DEC	.255	.	.240	.245	
NITROGEN TOT KJELD (MG/L)				DET'N LIMIT = .020	GUIDELINE = N/A
JAN	.	.110	.120	.130	
FEB	.170	.090 <T	.100	.090 <T	
MAR	.170	.100	.100	.130	
APR	.170	.120	.120	.120	
MAY	.180	.110	.110	.120	
JUN	.160	.160	.110	.110	
JUL	.240	.140	.140	.140	
AUG	.180	.110	.110	.100	
SEP	.160	.130	.110	.130	
OCT	.210	.140	.160	.150	
NOV	.110	.050 <T	.100	.120	
DEC	.420	.	.120	.100	

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 1	
			STANDING	FREE FLOW
PH (N/A)				DET'N LIMIT = N/A GUIDELINE = 6.5-8.5 (A4)
JAN	.	7.930	7.960	7.970
FEB	8.170	8.090	8.020	8.020
MAR	8.220	8.020	8.250	8.160
APR	8.170	8.110	8.090	8.140
MAY	8.210	8.220	8.260	8.260
JUN	8.230	8.020	8.120	8.130
JUL	8.090	7.790	7.800	7.820
AUG	8.270	8.180	8.240	8.240
SEP	8.240	8.050	8.050	8.080
OCT	8.260	8.150	8.130	8.160
NOV	8.190	7.900	7.820	8.070
DEC	8.180	.	8.120	8.110
PHOSPHORUS FIL REACT (MG/L)				DET'N LIMIT = .0005 GUIDELINE = N/A
JAN	.	.005	.	.
FEB	.001 <T	.007	.	.
MAR	BDL	.003	.	.
APR	BDL	BDL	.	.
MAY	BDL	.003	.	.
JUN	BDL	.002 <T	.	.
JUL	.000 <T	.003	.	.
AUG	.000 <T	.005	.	.
SEP	BDL	.001 <T	.	.
OCT	.001 <T	.004	.	.
NOV	.001 <T	.003	.	.
DEC	.001 <T	.	.	.
PHOSPHORUS TOTAL (MG/L)				DET'N LIMIT = .002 GUIDELINE = .40 (F2)
JAN	.	.003 <T	.	.
FEB	.005 <T	.009 <T	.	.
MAR	.003 <T	.005 <T	.	.
APR	.003 <T	BDL	.	.
MAY	.004 <T	.006 <T	.	.
JUN	.003 <T	.002 <T	.	.
JUL	.004 <T	.008 <T	.	.
AUG	.006 <T	.007 <T	.	.
SEP	.004 <T	.004 <T	.	.
OCT	.003 <T	.005 <T	.	.
NOV	.002 <T	.002 <T	.	.
DEC	.009 <T	.	.	.
SULPHATE (MG/L)				DET'N LIMIT = .200 GUIDELINE = 500 (A3)
JAN	.	19.450	19.480	19.310
FEB	13.680	16.660	16.810	16.480
MAR	15.320	19.450	19.070	19.310
APR	13.340	17.130	17.280	17.260
MAY	13.760	17.810	17.920	17.930
JUN	14.990	19.060	20.190	20.160
JUL	14.940	19.240	19.220	19.200
AUG	14.910	19.900	19.460	19.370
SEP	15.970	21.210	21.070	21.120
OCT	17.010	20.940	21.370	20.400
NOV	15.120	18.270	19.960	19.220
DEC	15.900	.	18.890	19.560

WATER TREATMENT PLANT DISTRIBUTION SYSTEM

	RAW	TREATED	SITE 1		
			STANDING	FREE FLOW	
				DET'N LIMIT = .02	GUIDELINE = 1.00 (A1)
TURBIDITY (FTU)					
JAN	.	.390	.400	.320	
FEB	.920	.370	.400	.250	
MAR	1.300	.590	.300	.400	
APR	.910	.520	.360	.640	
MAY	.680	.880	.830	.490	
JUN	.710	.250 <T	.310	.200 <T	
JUL	.890	.370	.940	.240 <T	
AUG	3.400	.280	.400	.240	
SEP	.900	.930	.400	.640	
OCT	.320	.380	.400	.580	
NOV	.650	.220	.240	.220	
DEC	3.200	.	.310	.230 <T	

WATER TREATMENT PLANT

DISTRIBUTION SYSTEM

	RAW	TREATED	SITE 1 STANDING	FREE FLOW
METALS				
SILVER (µG/L)				**DET'N LIMIT = .020 GUIDELINE = 50 (A1)**
JAN	.	BDL	BDL	BDL
FEB	BDL	BDL	.040 <T	.030 <T
MAR	.060 <T	.040 <T	.030 <T	.110 <T
APR	BDL	BDL	BDL	BDL
MAY	BDL	BDL	BDL	BDL
JUN	BDL	BDL	BDL	BDL
JUL	BDL	BDL	.030 <T	.040 <T
AUG	BDL	BDL	.040 <T	BDL
SEP	.040 <T	BDL	BDL	.040 <T
OCT	BDL	BDL	BDL	BDL
NOV	BDL	BDL	BDL	BDL
DEC	BDL	.	BDL	BDL
ALUMINUM (µG/L)				**DET'N LIMIT = .050 GUIDELINE = 100 (A4)**
JAN	.	54.520	47.560	48.720
FEB	11.020	52.200	37.120	45.240
MAR	6.148	39.440	29.000	37.120
APR	4.292	42.920	56.840	41.760
MAY	8.004	49.880	42.920	42.920
JUN	5.200	120.000	56.000	68.000
JUL	12.000	130.000	89.000	99.000
AUG	35.000	190.000	160.000	160.000
SEP	10.000	180.000	130.000	140.000
OCT	7.400	110.000	64.000	84.000
NOV	7.800	110.000	51.000	65.000
DEC	39.000	.	69.000	63.000
ARSENIC (µG/L)				**DET'N LIMIT = .050 GUIDELINE = 50. (A1)**
JAN	.	.520 <T	.550 <T	.660 <T
FEB	.480 <T	.680 <T	.420 <T	.580 <T
MAR	1.400	1.200	1.100	.830 <T
APR	.930 <T	.690 <T	.820 <T	.450 <T
MAY	.880 <T	.920 <T	.870 <T	.770 <T
JUN	1.400	.990 <T	1.100	1.500
JUL	1.200	1.300	.980 <T	1.300
AUG	.890 <T	1.100	1.200	1.300
SEP	1.100	1.200	1.300	1.200
OCT	.730 <T	.800 <T	.630 <T	.780 <T
NOV	.640 <T	.760 <T	.470 <T	.710 <T
DEC	.750 <T	.	.750 <T	.880 <T
BARIUM (µG/L)				**DET'N LIMIT = .020 GUIDELINE = 1000. (A1)**
JAN	.	14.000	14.000	14.000
FEB	14.000	14.000	14.000	14.000
MAR	15.000	14.000	15.000	14.000
APR	14.000	14.000	16.000	14.000
MAY	14.000	14.000	14.000	14.000
JUN	15.000	15.000	16.000	15.000
JUL	14.000	14.000	14.000	14.000
AUG	15.000	14.000	15.000	15.000
SEP	14.000	14.000	15.000	15.000
OCT	14.000	14.000	15.000	14.000
NOV	14.000	14.000	15.000	14.000
DEC	15.000	.	15.000	15.000

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 1	
			STANDING	FREE FLOW
BORON (µG/L)				DET'N LIMIT = .200 GUIDELINE = 5000. (A1)
JAN	.	14.000 <T	14.000 <T	35.000
FEB	14.000 <T	56.000	52.000	22.000
MAR	49.000	52.000	50.000	14.000 <T
APR	130.000	160.000	88.000	24.000
MAY	140.000	120.000	150.000	160.000
JUN	24.000	24.000	22.000	23.000
JUL	24.000	24.000	24.000	25.000
AUG	14.000 <T	24.000	35.000	40.000
SEP	25.000	21.000	34.000	38.000
OCT	17.000 <T	14.000 <T	20.000 <T	17.000 <T
NOV	13.000 <T	14.000 <T	16.000 <T	17.000 <T
DEC	14.000 <T	.	18.000 <T	18.000 <T
BERYLLIUM (µG/L)				DET'N LIMIT = .010 GUIDELINE = N/A
JAN	.	BDL	BDL	.040 <T
FEB	BDL	.030 <T	.030 <T	BDL
MAR	BDL	.080 <T	.060 <T	BDL
APR	.050 <T	.070 <T	.020 <T	BDL
MAY	.290 <T	BDL	.100 <T	.230 <T
JUN	.080 <T	.100 <T	.070 <T	.060 <T
JUL	.090 <T	.090 <T	.130 <T	.090 <T
AUG	.050 <T	.070 <T	.080 <T	.050 <T
SEP	.080 <T	BDL	.030 <T	.050 <T
OCT	BDL	BDL	BDL	BDL
NOV	BDL	.020 <T	.030 <T	BDL
DEC	BDL	.	BDL	BDL
CADMIUM (µG/L)				DET'N LIMIT = .050 GUIDELINE = 5.00 (A1)
JAN	.	BDL	BDL	BDL
FEB	BDL	BDL	BDL	BDL
MAR	BDL	.060 <T	.480 <T	BDL
APR	BDL	BDL	.120 <T	BDL
MAY	BDL	BDL	BDL	BDL
JUN	.080 <T	.110 <T	.100 <T	.100 <T
JUL	BDL	BDL	BDL	BDL
AUG	BDL	BDL	BDL	BDL
SEP	BDL	BDL	BDL	BDL
OCT	.330 <T	BDL	.070 <T	BDL
NOV	BDL	BDL	BDL	BDL
DEC	BDL	.	BDL	BDL
COBALT (µG/L)				DET'N LIMIT = .020 GUIDELINE = N/A
JAN	.	.160 <T	.170 <T	.090 <T
FEB	.040 <T	.030 <T	.060 <T	.030 <T
MAR	.120 <T	.150 <T	.290 <T	.180 <T
APR	.080 <T	.040 <T	.060 <T	.080 <T
MAY	.090 <T	.110 <T	.100 <T	.130 <T
JUN	.030 <T	BDL	BDL	BDL
JUL	BDL	BDL	BDL	BDL
AUG	.150 <T	.100 <T	.090 <T	.080 <T
SEP	.110 <T	.120 <T	.140 <T	.070 <T
OCT	.100 <T	.100 <T	.100 <T	.080 <T
NOV	.120 <T	.150 <T	.120 <T	.090 <T
DEC	.130 <T	.	.040 <T	.060 <T

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 1	
			STANDING	FREE FLOW
CHROMIUM (µG/L)				**DET'N LIMIT = 0.100 GUIDELINE = 50. (A1)**
JAN	.	BDL	.170 <T	4.600
FEB	BDL	4.500	4.300	1.000 <T
MAR	6.200	6.800	6.100	.560 <T
APR	5.000	6.400	3.400	.770 <T
MAY	5.600	5.200	6.000	6.500
JUN	3.800	3.800	3.100	3.700
JUL	3.800	4.000	3.700	4.000
AUG	.440 <T	2.200	4.100	5.000
SEP	2.200	1.700	4.000	4.600
OCT	1.400	.440 <T	2.800	1.300
NOV	.460 <T	.770 <T	1.100	1.900
DEC	.150 <T	.	1.300	1.300
COPPER (µG/L)				**DET'N LIMIT = .100 GUIDELINE = 1000 (A3)**
JAN	.	2.600	29.000	3.100
FEB	15.000	13.000	190.000	4.200
MAR	17.000	11.000	220.000	5.700
APR	18.000	4.300	17.000	6.300
MAY	29.000	3.200	3.200	2.900
JUN	28.000	6.000	130.000	8.200
JUL	27.000	5.300	100.000	5.300
AUG	35.000	4.400	13.000	3.200
SEP	42.000	2.900	17.000	3.300
OCT	36.000	3.000	130.000	6.700
NOV	25.000	1.100	110.000	5.900
DEC	20.000	.	26.000	2.900
IRON (µG/L)				**DET'N LIMIT = 4.00 GUIDELINE = 300 (A3)**
JAN	.	50.000 <T	BDL	5.200 <T
FEB	17.000 <T	28.000 <T	7.500 <T	13.000 <T
MAR	BDL	5.700 <T	BDL	8.700 <T
APR	8.600 <T	11.000 <T	BDL	5.100 <T
MAY	6.100 <T	18.000 <T	BDL	BDL
JUN	BDL	8.400 <T	11.000 <T	10.000 <T
JUL	BDL	BDL	8.800 <T	7.400 <T
AUG	53.000	6.200 <T	7.200 <T	BDL
SEP	11.000 <T	16.000 <T	16.000 <T	15.000 <T
OCT	8.300 <T	38.000 <T	15.000 <T	19.000 <T
NOV	12.000 <T	5.500 <T	11.000 <T	7.600 <T
DEC	74.000	.	16.000 <T	22.000 <T
MERCURY (µG/L)				**DET'N LIMIT = 0.010 GUIDELINE = 1.00 (A1)**
JAN	.	.020 <T	.	.020 <T
FEB	.030 <T	.030 <T	.	BDL
MAR	.030 <T	.020 <T	.	.030 <T
APR	BDL	BDL	.	BDL
MAY	.080	.030 <T	.	.030 <T
JUN	BDL	.030 <T	.	.030 <T
JUL	BDL	BDL	.	BDL
AUG	.020 <T	.050 <T	.	.040 <T
SEP	.040 <T	.030 <T	.	.020 <T
OCT	.040 <T	.040 <T	.	.030 <T
NOV	.020 <T	.020 <T	.	.040 <T
DEC	.050 <T	.	.	.040 <T

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 1	
			STANDING	FREE FLOW
MANGANESE (µG/L)				DET'N LIMIT = .050 GUIDELINE = 50.0 (A3)
JAN	.	1.200	.330 <T	.740
FEB	1.300	1.400	.570	.690
MAR	.790	.810	.890	.720
APR	.640	.650	.080 <T	.340 <T
MAY	.840	.810	.730	.700
JUN	.910	.850	1.100	1.700
JUL	.940	.620	.570	1.600
AUG	3.400	.580	1.800	1.900
SEP	1.000	.930	1.400	1.900
OCT	.720	1.800	7.200	2.100
NOV	.680	1.200	3.800	1.100
DEC	4.200	.	2.400	2.600
MOLYBDENUM (µG/L)				DET'N LIMIT = 0.02 GUIDELINE = N/A
JAN	.	.450 <T	.470 <T	.550
FEB	.500 <T	.540	.440 <T	.590
MAR	.740	.830	.730	.800
APR	.630	.660	.680	.700
MAY	.510	.680	.680	.620
JUN	.880	.810	.890	.850
JUL	.810	.670	.800	.770
AUG	.690	.740	.690	.660
SEP	.700	.730	.670	.710
OCT	.470 <T	.500 <T	.500 <T	.470 <T
NOV	.440 <T	.410 <T	.520	.530
DEC	.450 <T	.	.470 <T	.510
NICKEL (µG/L)				DET'N LIMIT = 0.10 GUIDELINE = 50 (F3)
JAN	.	1.300 <T	4.900	.200 <T
FEB	BDL	BDL	.860 <T	BDL
MAR	.540 <T	.490 <T	24.000	.460 <T
APR	.460 <T	.660 <T	.600 <T	.480 <T
MAY	.800 <T	.560 <T	.740 <T	.640 <T
JUN	.390 <T	.260 <T	.180 <T	BDL
JUL	BDL	BDL	BDL	BDL
AUG	.770 <T	.460 <T	.520 <T	.350 <T
SEP	.850 <T	.810 <T	.650 <T	.600 <T
OCT	.580 <T	.400 <T	.460 <T	.790 <T
NOV	.750 <T	1.000 <T	1.600 <T	.770 <T
DEC	.560 <T	.	4.400	.140 <T
LEAD (µG/L)				DET'N LIMIT = 0.05 GUIDELINE = 50. (A1)
JAN	.	.170 <T	5.100	.340
FEB	.060 <T	.260	12.000	.490
MAR	.230	.340	8.900	.390
APR	.150 <T	.410	2.000	.548
MAY	.440	.480	.640	.630
JUN	.280	.170 <T	18.000	.750
JUL	.220	.690	11.000	1.300
AUG	.710	.740	1.900	.830
SEP	.130 <T	.630	3.300	.840
OCT	92.000 RRV	1.100	13.000	1.500
NOV	.100 <T	BDL	18.000	.570
DEC	.300	.	3.100	.270

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 1	
			STANDING	FREE FLOW
ANTIMONY (µG/L)				DET'N LIMIT = .050 GUIDELINE = 146 (D4)
JAN	.	.500	.540	.500
FEB	.500	.520	.520	.470
MAR	.770	.610	.890	.590
APR	.580	.650	.650	.610
MAY	.710	.720	.730	.770
JUN	1.000	.740	1.300	.750
JUL	.700	.670	.990	.620
AUG	.560	.630	.630	.550
SEP	.660	.610	.710	.570
OCT	.570	.540	.810	.540
NOV	.490	.470	.690	.430
DEC	.380	.	.560	.560
SELENIUM (µG/L)				DET'N LIMIT = .200 GUIDELINE = 10. (A1)
JAN	.	1.800 <T	1.400 <T	.860 <T
FEB	BDL	BDL	1.200 <T	.710 <T
MAR	1.500 <T	3.400 <T	7.200 <T	.410 <T
APR	3.500 <T	5.300 <T	3.800 <T	4.300 <T
MAY	2.700 <T	3.700 <T	3.400 <T	4.300 <T
JUN	1.500 <T	3.000 <T	4.500 <T	4.400 <T
JUL	1.100 <T	3.800 <T	3.300 <T	5.800
AUG	BDL	1.500 <T	2.700 <T	3.400 <T
SEP	1.700 <T	2.000 <T	2.800 <T	1.100 <T
OCT	BDL	BDL	BDL	1.100 <T
NOV	BDL	BDL	BDL	BDL
DEC	BDL	.	BDL	BDL
STRONTIUM (µG/L)				DET'N LIMIT = .050 GUIDELINE = N/A
JAN	.	95.000	96.000	95.000
FEB	100.000	100.000	99.000	97.000
MAR	110.000	110.000	110.000	110.000
APR	100.000	100.000	110.000	100.000
MAY	100.000	99.000	100.000	100.000
JUN	110.000	110.000	110.000	110.000
JUL	100.000	100.000	100.000	100.000
AUG	100.000	110.000	110.000	110.000
SEP	100.000	100.000	100.000	110.000
OCT	100.000	99.000	110.000	100.000
NOV	100.000	100.000	100.000	98.000
DEC	100.000	.	100.000	100.000
TITANIUM (µG/L)				DET'N LIMIT = .050 GUIDELINE = N/A
JAN	.	2.600	2.400	2.900
FEB	2.300	2.200	2.000 <T	2.200
MAR	2.500	2.600	2.500	2.100
APR	5.300	4.800	5.100	5.100
MAY	3.700	3.900	4.200	4.100
JUN	4.900	4.900	5.700	5.500
JUL	3.500	4.200	4.300	4.100
AUG	3.500	2.900	3.000	3.100
SEP	3.700	3.600	3.600	3.600
OCT	2.000 <T	2.500	2.500	2.600
NOV	2.000 <T	2.400	2.300	2.200
DEC	3.700	.	2.600	2.600

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 1	
			STANDING	FREE FLOW
THALLIUM (µG/L)				DET'N LIMIT = .010 GUIDELINE = 13. (D4)
JAN	.	BDL	BDL	BDL
FEB	BDL	BDL	BDL	BDL
MAR	BDL	.020 <T	.040 <T	BDL
APR	.160 <T	.090 <T	BDL	BDL
MAY	BDL	BDL	.030 <T	.060 <T
JUN	.030 <T	.050 <T	.050 <T	.100 <T
JUL	BDL	BDL	BDL	BDL
AUG	BDL	BDL	BDL	BDL
SEP	BDL	.060 <T	.030 <T	.060 <T
OCT	BDL	BDL	BDL	.020 <T
NOV	BDL	BDL	.020 <T	.020 <T
DEC	BDL	.	BDL	BDL
URANIUM (µG/L)				DET'N LIMIT = .020 GUIDELINE = 20 (A2)
JAN	.	.180 <T	.170 <T	.160 <T
FEB	.150 <T	.240	.070 <T	.180 <T
MAR	.340	.270	.240	.360
APR	.420	.340	.350	.330
MAY	.320	.250	.260	.240
JUN	.330	.350	.170 <T	.200 <T
JUL	.470	.330	.290	.280
AUG	.310	.230	.240	.220
SEP	.320	.220	.290	.240
OCT	.200 <T	.150 <T	.080 <T	.140 <T
NOV	.210	.160 <T	.100 <T	.120 <T
DEC	.240	.	.190 <T	.170 <T
VANADIUM (µG/L)				DET'N LIMIT = .050 GUIDELINE = N/A
JAN	.	.440 <T	.410 <T	.440 <T
FEB	.150 <T	.360 <T	.340 <T	.370 <T
MAR	.240 <T	.590	.340 <T	.500 <T
APR	.250 <T	.580	.660	.550
MAY	.260 <T	.650	.660	.670
JUN	.290 <T	.620	.480 <T	.680
JUL	.260 <T	.590	.490 <T	.580
AUG	.340 <T	.670	.640	.640
SEP	.300 <T	.680	.680	.630
OCT	.260 <T	.460 <T	.470 <T	.470 <T
NOV	.190 <T	.390 <T	.360 <T	.410 <T
DEC	.290 <T	.	.340 <T	.290 <T
ZINC (µG/L)				DET'N LIMIT = .001 GUIDELINE = 5000. (A3)
JAN	.	33.000	12.000	1.200
FEB	1.800	30.000	89.000	1.300
MAR	1.800	32.000	330.000	2.100
APR	2.500	16.000	13.000	2.600
MAY	3.000	25.000	3.800	3.300
JUN	2.800	16.000	21.000	2.800
JUL	2.600	43.000	18.000	2.200
AUG	2.100	51.000	3.800	.990 <T
SEP	3.000	30.000	12.000	1.800
OCT	1.800	38.000	13.000	1.800
NOV	2.100	1.300	220.000	2.800
DEC	1.900	.	12.000	.770 <T

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 1	
			STANDING	FREE FLOW
PESTICIDES & PCB				
ALPHA BHC (NG/L)				DET'N LIMIT = 1.000 GUIDELINE = 700 (G)
JAN	.	1.000 <T	.	BDL
FEB	1.000 <T	BDL	.	1.000 <T
MAR	2.000 <T	BDL	.	3.000 <T
APR	IPE	IPE	.	IPE
MAY	BDL	BDL	.	BDL
JUN	2.000 <T	4.000 <T	.	2.000 <T
JUL	3.000 <T	7.000 <T	.	4.000 <T
AUG	BDL	BDL	.	2.000 <T
SEP	BDL	1.000 <T	.	1.000 <T
OCT	BDL	1.000 <T	.	1.000 <T
NOV	BDL	BDL	.	BDL
DEC	1.000 <T	.	.	2.000 <T

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM			
	RAW		TREATED		SITE 1	
					STANDING	FREE FLOW
PHENOLICS (µG/L PHENOLICS)						DET'N LIMIT = 0.20 GUIDELINE = 2.00 (A3)
JAN	.		.800		.	.
FEB	.800		.800		.	.
MAR	.600	<T	.400	<T	.	.
APR	.600	<T	.600	<T	.	.
MAY	1.200		1.600		.	.
JUN	2.000		.800	<T	.	.
JUL	.700	<T	.700	<T	.	.
AUG	.600	<T	.600	<T	.	.
SEP	1.200		.800	<T	.	.
OCT	1.400		.600	<T	.	.
NOV	BDL		BDL		.	.
DEC	INR		.		.	.

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 1	
			STANDING	FREE FLOW
VOLATILES				
BENZENE (µG/L)				DET'N LIMIT = .050 GUIDELINE = 5.0 (B1)
JAN	.	BDL	.	BDL
FEB	BDL	BDL	.	BDL
MAR	BDL	BDL	.	BDL
APR	BDL	BDL	.	BDL
MAY	BDL	BDL	.	BDL
JUN	BDL	BDL	.	BDL
JUL	BDL	.050 <T	.	BDL
AUG	BDL	BDL	.	BDL
SEP	BDL	BDL	.	BDL
OCT	BDL	BDL	.	BDL
NOV	BDL	BDL	.	BDL
DEC	IU	.	.	BDL
TOLUENE (µG/L)				DET'N LIMIT = .050 GUIDELINE = 24. (B4)
JAN	.	BDL	.	.100 <T
FEB	.050 <T	.050 <T	.	.050 <T
MAR	BDL	BDL	.	BDL
APR	.050 <T	.050 <T	.	.050 <T
MAY	.050 <T	BDL	.	BDL
JUN	BDL	BDL	.	BDL
JUL	.050 <T	.050 <T	.	.050 <T
AUG	BDL	.150 <T	.	BDL
SEP	.050 <T	BDL	.	BDL
OCT	BDL	BDL	.	BDL
NOV	BDL	BDL	.	BDL
DEC	IU	.	.	BDL
ETHYLBENZENE (µG/L)				DET'N LIMIT = .050 GUIDELINE = 2.4 (B4)
JAN	.	BDL	.	.050 <T
FEB	.050 <T	.050 <T	.	.050 <T
MAR	.050 <T	.050 <T	.	.100 <T
APR	.050 <T	.050 <T	.	.050 <T
MAY	.050 <T	BDL	.	BDL
JUN	.050 <T	BDL	.	.050 <T
JUL	BDL	BDL	.	BDL
AUG	BDL	.050 <T	.	BDL
SEP	BDL	BDL	.	BDL
OCT	BDL	BDL	.	BDL
NOV	BDL	BDL	.	BDL
DEC	IU	.	.	BDL
P-XYLENE (µG/L)				DET'N LIMIT = .10 GUIDELINE = 300 (B4)
JAN	.	BDL	.	BDL
FEB	BDL	BDL	.	BDL
MAR	BDL	BDL	.	BDL
APR	BDL	.200 <T	.	BDL
MAY	BDL	BDL	.	BDL
JUN	BDL	BDL	.	BDL
JUL	BDL	BDL	.	BDL
AUG	BDL	BDL	.	BDL
SEP	BDL	BDL	.	BDL
OCT	BDL	BDL	.	BDL
NOV	BDL	BDL	.	BDL
DEC	IU	.	.	BDL

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM		
	RAW	TREATED	SITE 1		
			STANDING	FREE FLOW	
M-XYLENE (µG/L)				DET'N LIMIT = .10	GUIDELINE = 300 (B4)
JAN	.	BDL	.	BDL	
FEB	BDL	BDL	.	BDL	
MAR	BDL	BDL	.	BDL	
APR	BDL	BDL	.	BDL	
MAY	BDL	BDL	.	BDL	
JUN	BDL	BDL	.	BDL	
JUL	BDL	BDL	.	BDL	
AUG	BDL	.100 <T	.	BDL	
SEP	BDL	BDL	.	BDL	
OCT	BDL	BDL	.	BDL	
NOV	BDL	BDL	.	BDL	
DEC	IU	.	.	BDL	
O-XYLENE (µG/L)				DET'N LIMIT = .10	GUIDELINE = 300 (B4)
JAN	.	BDL	.	BDL	
FEB	BDL	BDL	.	BDL	
MAR	BDL	BDL	.	.050 <T	
APR	BDL	BDL	.	BDL	
MAY	BDL	BDL	.	BDL	
JUN	BDL	BDL	.	.050 <T	
JUL	BDL	BDL	.	BDL	
AUG	BDL	.050 <T	.	BDL	
SEP	BDL	BDL	.	.050 <T	
OCT	BDL	BDL	.	BDL	
NOV	BDL	BDL	.	BDL	
DEC	IU	.	.	BDL	
STYRENE (µG/L)				DET'N LIMIT = .050	GUIDELINE = 46.5 (D2)
JAN	.	.050 <T	.	.050 <T	
FEB	.200 <T	BDL	.	BDL	
MAR	.550	BDL	.	BDL	
APR	.300 <T	BDL	.	BDL	
MAY	.250 <T	BDL	.	BDL	
JUN	.100 <T	BDL	.	.050 <T	
JUL	.100 <T	BDL	.	BDL	
AUG	.100 <T	.050 <T	.	BDL	
SEP	.100 <T	BDL	.	BDL	
OCT	.150 <T	BDL	.	BDL	
NOV	.200 <T	.050 <T	.	.050 <T	
DEC	IU	.	.	BDL	
CHLOROFORM (µG/L)				DET'N LIMIT = .100	GUIDELINE = 350 (A1+)
JAN	.	19.800	.	16.200	
FEB	BDL	16.300	.	16.700	
MAR	BDL	20.200	.	23.100	
APR	BDL	19.000	.	16.300	
MAY	BDL	19.100	.	16.900	
JUN	BDL	28.400	.	27.200	
JUL	BDL	32.300	.	28.300	
AUG	BDL	23.600	.	23.200	
SEP	BDL	45.700	.	23.900	
OCT	BDL	21.100	.	17.200	
NOV	BDL	23.400	.	22.700	
DEC	IU	.	.	24.800	

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 1	
			STANDING	FREE FLOW
111, TRICHLOROETHANE (µG/L)				DET'N LIMIT = .020 GUIDELINE = 200 (D1)
JAN	.	BDL	.	BDL
FEB	BDL	BDL	.	BDL
MAR	.040 <T	BDL	.	BDL
APR	BDL	BDL	.	BDL
MAY	BDL	BDL	.	BDL
JUN	.040 <T	BDL	.	BDL
JUL	BDL	BDL	.	BDL
AUG	BDL	.340	.	.400
SEP	BDL	BDL	.	BDL
OCT	BDL	BDL	.	BDL
NOV	BDL	BDL	.	BDL
DEC	IU	.	.	.040 <T
DICHLOROBROMOMETHANE (µG/L)				DET'N LIMIT = .050 GUIDELINE = 350 (A1+)
JAN	.	9.750	.	8.000
FEB	BDL	8.400	.	8.100
MAR	BDL	9.100	.	8.850
APR	BDL	9.000	.	8.050
MAY	BDL	8.250	.	7.200
JUN	BDL	11.300	.	10.100
JUL	BDL	11.900	.	11.400
AUG	BDL	10.100	.	11.050
SEP	BDL	11.950	.	10.800
OCT	BDL	9.450	.	8.900
NOV	BDL	10.150	.	10.150
DEC	IU	.	.	10.050
CHLORODIBROMOMETHANE (µG/L)				DET'N LIMIT = .100 GUIDELINE = 350 (A1+)
JAN	.	4.200	.	3.700
FEB	BDL	3.400	.	3.300
MAR	BDL	3.500	.	3.600
APR	BDL	3.100	.	3.300 APS
MAY	BDL	3.500	.	3.100
JUN	BDL	4.000	.	3.800
JUL	BDL	4.400	.	4.300
AUG	BDL	4.300	.	4.600
SEP	BDL	4.000	.	4.100
OCT	BDL	4.000	.	3.900
NOV	BDL	3.800	.	4.100
DEC	IU	.	.	4.100
T-CHLOROETHYLENE (µG/L)				DET'N LIMIT = .050 GUIDELINE = 10.0 (C2)
JAN	.	BDL	.	BDL
FEB	BDL	BDL	.	BDL
MAR	BDL	BDL	.	BDL
APR	BDL	BDL	.	BDL
MAY	BDL	BDL	.	BDL
JUN	BDL	BDL	.	BDL
JUL	BDL	BDL	.	BDL
AUG	BDL	.150 <T	.	BDL
SEP	BDL	BDL	.	BDL
OCT	BDL	BDL	.	BDL
NOV	BDL	BDL	.	BDL
DEC	IU	.	.	BDL

	WATER TREATMENT PLANT		DISTRIBUTION SYSTEM	
	RAW	TREATED	SITE 1	
			STANDING	FREE FLOW
BROMOFORM (µG/L)				**DET'N LIMIT = .200 GUIDELINE = 350 (A1+)**
JAN	.	.400 <T	.	BDL
FEB	BDL	.200 <T	.	.200 <T
MAR	BDL	.400 <T	.	.400 <T
APR	BDL	.200 <T	.	.400 <T
MAY	BDL	.400 <T	.	.200 <T
JUN	BDL	.200 <T	.	.400 <T
JUL	BDL	.400 <T	.	.400 <T
AUG	BDL	.400 <T	.	.400 <T
SEP	BDL	.400 <T	.	.400 <T
OCT	BDL	.400 <T	.	.400 <T
NOV	BDL	.400 <T	.	.400 <T
DEC	IU	.	.	.200 <T
1,4 DICHLOROBENZENE (µG/L)				**DET'N LIMIT = .100 GUIDELINE = 1.00 (B4)**
JAN	.	BDL	.	BDL
FEB	BDL	BDL	.	BDL
MAR	BDL	BDL	.	BDL
APR	BDL	BDL	.	BDL
MAY	BDL	BDL	.	BDL
JUN	BDL	BDL	.	BDL
JUL	BDL	BDL	.	BDL
AUG	BDL	.100 <T	.	BDL
SEP	BDL	BDL	.	BDL
OCT	BDL	BDL	.	BDL
NOV	BDL	BDL	.	BDL
DEC	IU	.	.	BDL
1,2 DICHLOROBENZENE (µG/L)				**DET'N LIMIT = .05 GUIDELINE = 3.00 (B4)**
JAN	.	BDL	.	BDL
FEB	BDL	BDL	.	BDL
MAR	BDL	BDL	.	BDL
APR	BDL	BDL	.	BDL
MAY	BDL	BDL	.	BDL
JUN	.050 <T	BDL	.	BDL
JUL	BDL	BDL	.	BDL
AUG	BDL	.050 <T	.	BDL
SEP	BDL	BDL	.	BDL
OCT	BDL	BDL	.	BDL
NOV	BDL	BDL	.	BDL
DEC	IU	.	.	BDL
TOTL TRIHALOMETHANES (µG/L)				**DET'N LIMIT = .50 GUIDELINE = 350 (A1)**
JAN	.	34.150	.	27.900
FEB	BDL	28.300	.	28.300
MAR	BDL	33.200	.	35.950
APR	BDL	31.300	.	28.050
MAY	BDL	31.250	.	27.400
JUN	BDL	43.900	.	41.500
JUL	BDL	49.000	.	44.400
AUG	BDL	38.400	.	39.250
SEP	BDL	62.050	.	39.200
OCT	BDL	34.950	.	30.400
NOV	BDL	37.750	.	37.350
DEC	IU	.	.	39.150

TRACE LEVELS OF TOLUENE ARE LABORATORY ARTIFACTS DERIVED FROM THE ANALYTICAL METHODOLOGY.

TRACE LEVELS OF STYRENE ARE CONSIDERED TO BE LABORATORY ARTIFACTS RESULTING FROM THE LABORATORY SHIPPING CONTAINERS.

Table 6

SCAN/PARAMETER	UNIT	DETECTION LIMIT	GUIDELINE
BACTERIOLOGICAL			
FECAL COLIFORM MEMBRANE FILTRATION	CT/100ML	0	0 (A1)
STANDARD PLATE COUNT MEMBRANE FILTRATION	CT/ML	0	500/ML(A1)
TOTAL COLIFORM MEMBRANE FILTRATION	CT/100ML	0	5/100mL(A1)
TOTAL COLIFORM BACKGROUND MF	CT/100ML	0	N/A
CHLOROAROMATICS			
HEXACHLOROBUTADIENE	NG/L	1.000	450. (D4)
1,2,3-TRICHLOROBENZENE	NG/L	5.000	10000 (I)
1,2,3,4-TETRACHLOROBENZENE	NG/L	1.000	10000 (I)
1,2,3,5-TETRACHLOROBENZENE	NG/L	1.000	10000 (I)
1,2,4-TRICHLOROBENZENE	NG/L	5.000	10000 (I)
1,2,4,5-TETRACHLOROBENZENE	NG/L	1.000	38000 (D4)
1,3,5-TRICHLOROBENZENE	NG/L	5.000	10000 (D4)
HEXACHLOROBENZENE	NG/L	1.0	10. (C1)
HEXACHLOROETHANE	NG/L	1.000	1900. (D4)
OCTACHLOROSTYRENE	NG/L	1.000	N/A
PENTACHLOROBENZENE	NG/L	1.000	74000 (D4)
2,3,6-TRICHLOROTOLUENE	NG/L	5.000	N/A
2,4,5-TRICHLOROTOLUENE	NG/L	5.000	N/A
2,6,A-TRICHLOROTOLUENE	NG/L	5.000	N/A
CHLOROPHENOLS			
2,3,4-TRICHLOROPHENOL	NG/L	50.	N/A
2,3,4,5-TETRACHLOROPHENOL	NG/L	50.	N/A
2,3,5,6-TETRACHLOROPHENOL	NG/L	50.	N/A
2,4,5-TRICHLOROPHENOL	NG/L	50.	2600000 (D4)
2,4,6-TRICHLOROPHENOL	NG/L	50.	2000. (B4)
PENTACHLOROPHENOL	NG/L	50.	30000. (B4)
CHEMISTRY (FLD)			
FIELD COMBINED CHLORINE RESIDUAL	MG/L	N/A	N/A
FIELD FREE CHLORINE RESIDUAL	MG/L	N/A	N/A
FIELD TOTAL CHLORINE RESIDUAL	MG/L	N/A	N/A
FIELD PH	DMSNLESS	N/A	6.5-8.5(A4)
FIELD TEMPERATURE	^{o}C	N/A	<15 ^{o}C(A1)
FIELD TURBIDITY	FTU	N/A	1.0 (A1)
CHEMISTRY (LAB)			
ALKALINITY	MG/L	.200	30-500(A4)
CALCIUM	MG/L	.100	100. (F2)
CYANIDE	MG/L	.001	.20(A1)
CHLORIDE	MG/L	.200	250. (A3)
COLOUR	TCU	.5	5.0 (A3)
CONDUCTIVITY	UMHO/CM	1.	400. (F2)
FLUORIDE	MG/L	.01	2.4 (A1)
HARDNESS	MG/L	.50	80-100(A4)
MAGNESIUM	MG/L	.05	30. (F2)

SCAN/PARAMETER	UNIT	DETECTION LIMIT	GUIDELINE
NITRITE	MG/L	.001	1.0 (A1)
TOTAL NITRATES	MG/L	.02	10. (A1)
NITROGEN TOTAL KJELDAHL	MG/L	.02	N/A
PH	DMSNLESS	N/A	6.5-8.5(A4)
PHOSPHORUS FIL REACT	MG/L	.0005	N/A
PHOSPHORUS TOTAL	MG/L	.002	.40(F2)
SULPHATE	MG/L	.200	500. (A3)
TOTAL SOLIDS	MG/L	1.	500. (A3)
TURBIDITY	FTU	.02	1.0 (A1)
METALS			
ALUMINUM	UG/L	.050	100. (A4)
ANTIMONY	UG/L	.050	10. (F3)
ARSENIC	UG/L	.050	50. (A1)
BARIUM	UG/L	.020	1000. (A1)
BORON	UG/L	.200	5000. (A1)
BERYLLIUM	UG/L	.010	0.20 (H)
CADMIUM	UG/L	.050	5.0 (A1)
COBALT	UG/L	.020	1000. (H)
CHROMIUM	UG/L	.100	50. (A1)
COPPER	UG/L	.100	1000. (A3)
IRON	UG/L	5.0	300. (A3)
MERCURY	UG/L	.01	1.0 (A1)
MANGANESE	UG/L	.050	50. (A3)
MOLYBDENUM	UG/L	.020	500. (H)
NICKEL	UG/L	.100	50. (F3)
LEAD	UG/L	.020	50. (A1)
SELENIUM	UG/L	.200	10. (A1)
SILVER	UG/L	.020	50. (A1)
STRONTIUM	UG/L	.100	2000. (H)
THALLIUM	UG/L	.010	13. (D4)
TITANIUM	UG/L	.100	N/A
URANIUM	UG/L	.020	20. (A2)
VANADIUM	UG/L	.020	100. (H)
ZINC	UG/L	.020	5000. (A3)
PHENOLICS			
PHENOLICS (UNFILTERED REACTIVE)	UG/L	.2	2.0 (A3)
PESTICIDES & PCB			
ALDRIN	NG/L	1.0	700. (A1)
AMETRINE	NG/L	50.	300000. (D3)
ATRAZINE	NG/L	50.	60000. (B3)
ALPHA HEXACHLOROCYCLOHEXANE (BHC)	NG/L	1.0	700. (G)
BETA HEXACHLOROCYCLOHEXANE (BHC)	NG/L	1.0	300. (G)
GAMMA HEXACHLOROCYCLOHEXANE(LINDANE)	NG/L	1.0	4000. (A1)
ALPHA CHLORDANE	NG/L	2.0	7000. (A1)
GAMMA CHLORDANE	NG/L	2.0	7000. (A1)
BLADEX	NG/L	100.	10000. (B3)
DIELDRIN	NG/L	2.0	700. (A1)
METHOXYCHLOR	NG/L	5.0	900000. (B1)
ENDOSULFAN 1 (THIODAN I)	NG/L	2.0	74000. (D4)
ENDOSULFAN 2 (THIODAN II)	NG/L	4.0	74000. (D4)
ENDRIN	NG/L	4.0	200. (A1)
ENDOSULFAN SULPHATE(THIODAN SULPHATE)	NG/L	4.0	N/A

SCAN/PARAMETER	UNIT	DETECTION LIMIT	GUIDELINE	
HEPTACHLOR EPOXIDE	NG/L	1.0	3000.	(A1)
HEPTACHLOR	NG/L	1.0	3000.	(A1)
METOLACHLOR	NG/L	500.	50000.	(B3)
MIREX	NG/L	5.0	N/A	
OXYCHLORDANE	NG/L	2.0	N/A	
O,P-DDT	NG/L	5.0	30000.	(A1)
PCB	NG/L	20.0	3000.	(A2)
O,P-DDD	NG/L	5.0	N/A	
PPDDE	NG/L	1.0	30000.	(A1)
PPDDT	NG/L	5.0	30000.	(A1)
ATRATONE	NG/L	50.	N/A	
ALACHLOR	NG/L	500.	35000.	(D2)
PROMETONE	NG/L	50.	52500.	(D3)
PROPAZINE	NG/L	50.	16000.	(D2)
PROMETRYNE	NG/L	50.	1000.	(B3)
SENCOR (METRIBUZIN)	NG/L	100.	80000.	(B2)
SIMAZINE	NG/L	50.	10000.	(B3)
POLYAROMATIC HYDROCARBONS				
PHENANTHRENE	NG/L	10.0	N/A	
ANTHRACENE	NG/L	1.0	N/A	
FLUORANTHENE	NG/L	20.0	42000.	(D4)
PYRENE	NG/L	20.0	N/A	
BENZO(A)ANTHRACENE	NG/L	20.0	N/A	
CHRYSENE	NG/L	50.0	N/A	
DIMETHYL BENZO(A)ANTHRACENE	NG/L	5.0	N/A	
BENZO(E)PYRENE	NG/L	50.0	N/A	
BENZO(B)FLUORANTHENE	NG/L	10.0	N/A	
PERYLENE	NG/L	10.0	N/A	
BENZO(K)FLUORANTHENE	NG/L	1.0	N/A	
BENZO(A)PYRENE	NG/L	5.0	10.	(B1)
BENZO(G,H,I)PERYLENE	NG/L	20.0	N/A	
DIBENZO(A,H)ANTHRACENE	NG/L	10.0	N/A	
INDENO(1,2,3-C,D)PYRENE	NG/L	20.0	N/A	
BENZO(B)CHRYSENE	NG/L	2.0	N/A	
CORONENE	NG/L	10.0	N/A	
SPECIFIC PESTICIDES				
TOXAPHENE	NG/L	N/A	5000.	(A1)
2,4,5-TRICHLOROBUTYRIC ACID	NG/L	50.	200000.	(B4)
(2,4,5-T)				
2,4-DICHLOROBUTYRIC ACID (2,4-D)	NG/L	100.	100000.	(A1)
2,4-DICHLORORPHENOXYBUTYRIC ACID	NG/L	200.	18000.	(B3)
2,4-D PROPIONIC ACID	NG/L	100.	N/A	
DICAMBA	NG/L	100.	120000.	(B1)
PICLORAM	NG/L	100.	190000.	(B3)
SILVEX (2,4,5-TP)	NG/L	50.	10000.	(A1)
DIAZINON	NG/L	20.	20000.	(B1)
DICHLOROVOS	NG/L	20.	N/A	
DURSBAN	NG/L	20.	N/A	
ETHION	NG/L	20.	35000.	(G)
GUTHION(AZINPHOSMETHYL)	NG/L	N/A	20000.	(B1)
MALATHION	NG/L	20.	190000.	(B1)
MEVINPHOS	NG/L	20.	N/A	
METHYL PARATHION	NG/L	50.	7000.	(A1)
METHYLTRITHION	NG/L	20.	N/A	

SCAN/PARAMETER	UNIT	DETECTION LIMIT	GUIDELINE	
PARATHION	NG/L	20.	50000.	(B1)
PHORATE (THIMET)	NG/L	20.	2000.	(B3)
RELDAN	NG/L	20.	N/A	
RONNEL	NG/L	20.	N/A	
AMINOCARB	NG/L	N/A	N/A	
BENONYL	NG/L	N/A	N/A	
BUX (METALKAMATE)	NG/L	2000.	N/A	
CARBOFURAN	NG/L	2000.	90000.	(B1)
CICP (CHLORPROPHAM)	NG/L	2000.	350000.	(G)
DIALLATE	NG/L	2000.	30000.	(H)
EPTAM	NG/L	2000.	N/A	
IPC	NG/L	2000.	N/A	
PROPOXUR (BAYGON)	NG/L	2000.	90000.	(G)
SEVIN (CARBARYL)	NG/L	200.	90000.	(B1)
SUTAN (BUTYLATE)	NG/L	2000.	245000.	(D3)
VOLATILES				
BENZENE	UG/L	.050	5.0	(B1)
TOLUENE	UG/L	.050	24.0	(B4)
ETHYLBENZENE	UG/L	.050	2.4	(B4)
PARA-XYLENE	UG/L	.100	300.	(B4)
META-XYLENE	UG/L	.100	300.	(B4)
ORTHO-XYLENE	UG/L	.050	300.	(B4)
1,1-DICHLOROETHYLENE	UG/L	.100	7.0	(D1)
ETHLYENE DIBROMIDE	UG/L	.05	.05	G)
METHYLENE CHLORIDE	UG/L	.500	50.	(B1)
TRANS-1,2-DICHLOROETHYLENE	UG/L	.100	70.	(D5)
1,1-DICHLOROETHANE	UG/L	.100	N/A	
CHLOROFORM	UG/L	.100	350.	(A1+)
1,1,1-TRICHLOROETHANE	UG/L	.020	200.	(D1)
1,2-DICHLOROETHANE	UG/L	.050	5.0	(D1)
CARBON TETRACHLORIDE	UG/L	.200	5.0	(B1)
1,2-DICHLOROPROPANE	UG/L	.050	6.0	(D5)
TRICHLOROETHYLENE	UG/L	.100	50.	(B1)
DICHLOROBROMOMETHANE	UG/L	.050	350.	(A1+)
1,1,2-TRICHLOROETHANE	UG/L	.050	.60	(D4)
CHLORODIBROMOMETHANE	UG/L	.100	350.	(A1+)
TETRACHLOROETHYLENE	UG/L	.050	10.0	(C2)
BROMOFORM	UG/L	.200	350.	(A1+)
1,1,2,2-TETRACHLOROETHANE	UG/L	.050	0.17	(D4)
CHLOROBENZENE	UG/L	.100	60.	(D5)
1,4-DICHLOROBENZENE	UG/L	.100	1.0	(B4)
1,3-DICHLOROBENZENE	UG/L	.100	130.	(G)
1,2-DICHLOROBENZENE	UG/L	.050	3.0	(B4)
TRIFLUOROCHLOROTOLUENE	UG/L	.100	N/A	
TOTAL TRIHALOMETHANES	UG/L	.500	350.	(A1)
STYRENE	UG/L	.05	140.	(D5)